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A consolidation of FIRE AND WATER ENGINEERING and THE FIRE ENGINEER

The Journal of the Fire Protection Profession

NOVEMBER 25, 1931

Overhauling is the Unromantic Side of Fire Fighting

ESTABLISHED 1877 PUBLISHED BI-WEEKLY

Keep his head up

and we'll all come through!

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WALTER S. GIFFORD

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Committee on Mobilization of Relief Resources

OWEN D. YOUNG

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Acting Chief, New York Fire Dept.

in collaboration with

PAUL W. KEARNEY

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"Get 'Em Young"—A pepper warehouse blaze—The ice plant fire—The dangers of dust—The menace of gasolene below grade—A fire started by water—Destroying a fireproof building.

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A Consolidation of FIRE AND WATER ENGINEERING *and* THE FIRE ENGINEER

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It Pays to Know

● THE story is told about a book agent who tried to sell some books to a farmer he found sitting on a fence by the roadside. When the subject was mentioned the farmer replied, "Naw, we don't want no books. We got three in the house now and that's enough." The agent persisted, urging that the books would help him do a better and more profitable farming job, but the old farmer answered "Naw, I don't want your books. I am farming only half as well as I know how anyway."

● A man who thinks he knows twice as much as he needs to know usually knows about half as much as he ought to know, and that goes for the farmer, the fire-fighter or anyone else.

● Can you imagine a fire chief fighting fires half as well as he knows how? Have you ever heard of a fire chief who isn't constantly striving to do his job twice as well? Can you picture any fire chief trying to keep up-to-date without reading FIRE ENGINEERING regularly?

The Publishers

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FIRE ENGINEERING

(A Consolidation of Fire and Water Engineering and The Fire Engineer)

The Journal of the Fire Protection Profession

VOLUME LXXXIV NOVEMBER 25, 1931 NUMBER 24

Fire Fighting in India

Contrasts in Up-to-Date Fire Brigades in the Larger Cities and Old Fashioned Methods in the More Remote Districts—The Type of Apparatus Needed

By WALTER BUCHLER, London, England

How they do things in foreign countries in the fire-fighting field is always interesting, especially when the country happens to be in the orient. The following article is illuminating as to methods employed in India:

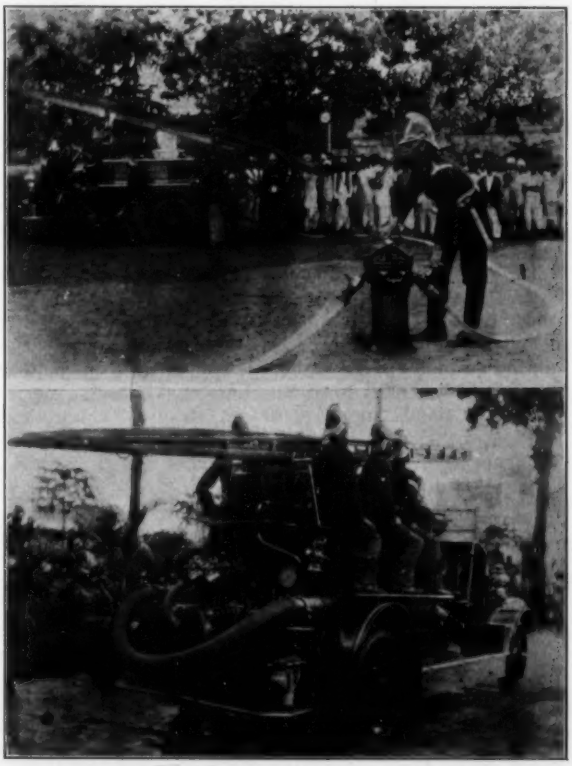
FIRES are, on the whole, not a frequent occurrence in India, but when they do take place they happen in houses made of wood and in buildings poorly constructed. This is especially the case in the congested Bazaars which constitute the Indian business centers in the towns and there wood is most generally employed, or rather was used when the buildings were erected and stand to this very day. The greatest cause of fires in India is sheer carelessness and lack of discipline on the part of the average Indian workman while at work. Fires also result through rubber insulation becoming useless, owing to climatic conditions as well as by Indian workmen effecting inadequate repairs and doing imperfect work when extending electrical installations. For cooking and heating the average Indian uses a "sigree" (an open brazier) in which charcoal is used as fuel. These articles are portable and often are placed too near inflammable materials. Many automobiles and trucks in use in India still have oil lamps, which cause fires through the petrol vapor coming into contact with the flame. Cleaning rags are often left under the bonnet of the car and catch fire.

Inflammable Conditions in Dwellings

In past years houses of Indians of the better class were constructed mostly of wood and those of the poorer classes of wood and palm leaves. More recently, however, corrugated iron sheeting is being extensively used, though with the latter class, wood and palm leaves are still widely employed. Dwellings of more than one floor are being constructed with fireproof material. The cooking in the home is done by electricity, gas or coal stoves in the larger towns, but in the smaller places oil stoves and charcoal or wood sigrees are used. Many fires are caused by the latter owing to the loose clothing (dhooties worn by men and saris by women) catching fire. The women invariably keep these stoves on the ground level, so that they may squat down when cooking.

Smoking indirectly accounts for a large percentage of fires in India, through the dropping of lighted matches, cigar, or cigarette ends, which quickly ignite dried-up grass, undergrowth, etc. Chimney fires are not very common in India, but occasionally cause trouble owing to faulty construction and improper use of wood.

It is very difficult to detect cases of arson, but quite a number of instances have arisen where paraffin oil has been poured over persons and property and ignited wilfully. This is also resorted to in cases of suicide. The most usual fire season in India is just before the Monsoon period (the rainy season) when it is very hot



Upper—Turning on the Water, with Native Indians Watching. The Officer in the Foreground Is a European. Lower—Indian Fire Brigade Answering an Alarm of Fire

—120 Fahrenheit in the shade being nothing uncommon —and everything is dried up.

Early Primitive Methods of Fighting Fire

Fire-fighting in olden times was not organized in India until the police authorities took the matter up and gradually brigades were formed in different parts of India. In out-of-the-way places water-carriers and men armed with sticks and policemen are the only means of fire protection. The supply of water varies from city to

Indian About to Jump from Window into Sheet, Which Firemen Are Holding, Bombay, India, Fire Brigade

city and depends also on the previous Monsoon. Water is drawn from adjacent rivers or the sea, from wells, and where there is no municipal supply of water, as for instance, in rural centers, the people have to rely on water kept in ponds, small lakes, or drawn from wells.

Fire Brigades Formed

As times went on, it was considered necessary in India to form fire-brigades under police authorities for the sake of discipline and order. But it was found that the police could seldom give sufficient attention to the necessary drilling and instruction required for maintaining a brigade on efficient lines.

In the leading cities, such as Bombay and Calcutta, special fire-brigades were formed (about 40 years ago) under the control of the local Municipality. Experienced members of the London Fire Brigade were engaged as officers to take charge and train Indian firemen in these cities. They are trained on the same lines as carried out in England; men are drawn from all classes and sects, if considered fit for the duties they are put to. Firemen receive thirty to forty rupees a month, motor drivers sixty to eighty, and engineers 80 to 120. They are all employed whole time with generous leave rules. Their attire consists of Blucher boots, blue trousers, serge tunics, and black leather helmets, and belts, which together with living quarters are provided free. These fire-brigades in the leading cities of India have reached a high degree of efficiency and are looked up to by provincial and other brigades as well as by the authorities for advice on all matters connected with the fire service and fire prevention. Instruction in fire extinction and prevention are given by the officers to boy-scouts and girl guides, officers and non-commissioned officers from the Indian Army also attend for instruction at fire brigade headquarters.

In large towns in India electric fire alarms are installed and the control of fire comes under the direction of the Chief Officer or senior officer delegated for this work.

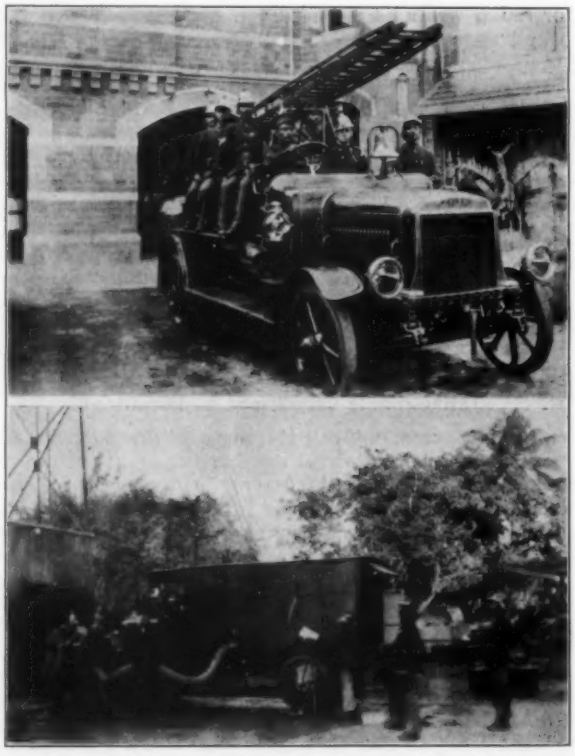
Types of Fire Apparatus Best Suited for India Service

In such cities the same fire apparatus is in use as is found in Western countries, and all the equipment is imported. Apparatus, as far as possible, should be foolproof, easy to handle, and of strong construction. and manufacturers or suppliers should, wherever possible, give service after purchase. One of the most useful appliances for use in India, where hydrants are not installed, is the motor chassis, having a large water tank fitted with a small pump and hose connections for fire work, for use as a road watering machine, etc. Suction hose should be fitted for drawing water from a river or well. Small trailer motor fire engines are also suitable for up-country work.

All Types of Chemical Fire Extinguishers in Use

All types of chemical fire-extinguishers are to be found in India, installed by railways, government offices, public buildings, oil companies, commercial firms, and in the palaces of Rajahs and Maharajahs. But the average Indian is still disinclined to put in anything of this kind into his house, because he cannot see a quick return for his money. Deterioration in chemical fire-extinguishers is an important factor to be reckoned with in India on account of the excessive heat, which causes the chemicals to deteriorate more rapidly than in cold climates, unless they contain some material such as Carbon Tetra Chloride. In the foam type of extinguisher

(*Continued on page* 907)



Upper—Indian Fire Brigade Leaving the Fire Station. Lower—Using Artificial Respiration on Man Rescued from Smoke, Bombay, India, Fire Brigade

Some of the Elements Which Help to Make

The Short Course Fire College a Success

How the Florida Short Course has Helped to Reduce Fire Losses in State—Methods of Instruction

By CHIEF WILLIAM R. ANDERSON, Fire Department, Fort Myers, Fla.

In the following paper the author points out the necessity for the formation of short course Fire Colleges in every state of the Union. He shows some of the benefits that have accrued to his own state—Florida—by the inauguration of such a course:

THE short course Fire Colleges that have been conducted in the various States have unquestionably been successful, not only from an educational standpoint, but they have helped to put the fire service of the smaller cities and towns on a higher plane in the estimation of the various city officials and large taxpayers. The knowledge gained also puts the small town Fire Chief in the position of knowing what he is talking about when he goes before his city officials for equipment. For example, if he wants salvage covers, and the Mayor asks him why he wants them, he does not have to say that he wants them because such and such a city has them, and has made good use of them. If he has attended a state Fire College, he can quickly and intelligently show his Mayor how the covers will be of tangible benefit to his city. And if his Mayor has the interest of his city at heart—and nearly all of them have—the Chief will get those covers.

"The time is not far distant when every state in the country will have fire college, as the firemen throughout the land have come to the conclusion that there is still much to learn about fire fighting and fire prevention. Anybody, if he is given enough time, can learn things for himself, but why take years of observation and practice to learn a thing that specialists can teach in a short time?"

Men Specialized on Subjects in This Year's Florida Course

The first Florida Fire College was held at Daytona Beach, May 7, 8 and 9, 1930, with a fine crop of instructors. At our first college we had a group system of instruction, a man was assigned to a group, under a group leader, he stayed with that group and attended every class, being graded by his group leader in the different subjects, and a report of his standing was sent to his Mayor. But this year instead of having each group attend classes in all subjects, the men were requested to register for some special course, and urged to stay with that course for the full three days. The committee felt that in this way, a city could send, say three men to attend the college and each one specialize in a different phase of fire fighting, at the end of three days we would be able to send back three men capable of acting as instructors in their respective departments.

The men were not merely given demonstrations of the different evolutions but every man was required to handle the equipment pertaining to the phase of fire fighting in which he was specializing until he was familiar enough with it to be able to disseminate it to his fellow firemen at home.

Few Papers as Possible Read at Sessions

The reading of papers was held to a minimum at this college. The committee felt that a man could take a paper home with him and get as much good out of it in the quiet of his home or station, as he could by having some one read it to him. With this thought in mind we requested the South-Eastern Underwriters Association to print us enough copies of three different papers to hand out to every man.

The papers picked as being of the most use were, "Building Codes and Construction," by L. C. Sledge, Engineer, S. E. U. A., "Electrical Hazards," by T. P. Branch, Engineer, S. E. U. A., and "Fire Prevention," by J. H. Howland, Engineer, National Board. In handling the papers in this way it gave us more time for practical work during the day, and left the night sessions open for round table discussion, and such papers as we thought should be read.

Method of Instruction at Short Course

Following is a short resumé of the different courses with the instructor in each: Fire Alarm Systems, by J. S. McGehee, Superintendent of Fire Alarms, Atlanta, Ga. The equipment for this course was furnished by the Gamewell Fire Alarm Company.

Salvage and inspection was handled by Chief D. W. Brosnan, of Albany, Ga., first Vice-President of the I. A. F. C. This class put in two days learning the principles of salvage work and the handling of equipment. On the third day this class was taken on a tour of inspection, making actual building inspections, and being instructed in the proper salvage methods to be employed in each of the different types of buildings. In connection with this course moving pictures which were furnished by the Association were shown. The entire assembly saw these pictures. I know of two cases since this college where the improvement in this line of work was so pronounced that it was the cause of editorial comment in the papers. I know of another case in a small city in my state where they had a fire in a garage apartment. The house was full of smoke when the department arrived. They put two lines in the second floor and after they had ruined everything up stairs, they found that the only fire they had was in a small closet on the ground floor. No one from this city had attended the Fire College. Chief Brosnan turned out some real salvage men for us.

Excellent Instructors Handle Important Subjects

Drill evolutions were split up, ladder evolutions being held in the morning of each day with Assistant Chief R. V. Johnson, of Daytona Beach as instructor. We were fortunate in having a man of Chief Johnson's ability to handle this subject. He is a graduate of the Boston Fire School where he specialized in ladder work. In the afternoon the class in drill evolutions were instructed in hose lay outs. This work was handled by our good friend Sherwood Brockwell, of Raleigh, N. C., and if there is one man who stands out above all others as an instructor it is this man Brockwell. We were indeed fortunate in getting a man of his outstanding ability to come down to Florida and assist us in making our Fire College the success that it was.

Ventilation and inspection was handled in a very efficient manner by Assist. Chief J. B. Chancey, of Jacksonville, Fla. A four story miniature metal building was used in demonstrating the principles of ventilation. On the third day the class was taken on a tour of inspection and instructed in inspection work and the proper method of ventilating different

types of buildings under all varieties of fire conditions.

Truck construction, maintenance and operation was handled by Assistant Chief J. R. Larrabee, of West Palm Beach. Chief Larrabee is one of the outstanding truck engineers in the State of Florida, and made a very able instructor. This class took a type 75, American-LaFrance pumper and worked on it for the full three days. The engine and chassis were gone over in detail, then the pump was taken out and dismantled, going into the function of every part.

At the night sessions there were papers on the Chemistry of fires, by Prof. Harry K. Brown, a volunteer member of the Sebring, Fla., Fire Department. Prof. Brown handled this subject in a way that could be understood by all. Building inspection was by H. D. Cutter, of the Southeastern Underwriters Association. Mr. Cutter has proven himself a real friend to the committee in his efforts to help us in making this college a success.

First aid and artificial resuscitation was handled at one of the night sessions by Chief J. F. MacMillian of Cocoa, Fla., a son of Chief H. R. MacMillian of Jacksonville. Chief MacMillian has a certificate of proficiency from the Red Cross and made a very able instructor in this important subject.

Keeping Up Interest in the College Work

One of the things that we had a hard time to overcome in Florida was the feeling by city officials that the Fire College was just another excuse for a good time. We overcome this by having speakers appear on the programs of the Florida League of Municipalities, and the Insurance Agents Convention, and by radio talks on the subject. One thing that we are having a still harder time overcoming is the lack of interest shown by a few of the older Chiefs in the state, but I might say they are very few.

A feature that I think has kept the interest up in the Fire College is the fact that we split our State Fireman's Association up into six districts with a district Vice-President in charge of each district who is required to hold at least three meetings in his district each year. We have demonstrations at each meeting, with speakers to talk on the value of the Fire College.

State Fire Loss Reduced by College

The Fire Loss in the State of Florida was reduced $294,179 in 1930, and from all reports there will be another reduction this year. The adjusters all say that the proportionate content loss, and water damage was much less in the past year than it has been in former years. At least part of this reduction is unquestionably the result of knowledge gained at the Fire College by the small town firemen.

Fire fighting has truly become a profession, and upon the training and judgment of the men in the fire service depends the safety, not only of our cities, but of the lives of our people. The men in the large cities have been able to get this training, due to the fact that they have the money to set up drill schools with trained drill masters. But it is not so with the small town departments. Quite frequently the only information they have about some new device or hazard has been secured from a trade magazine. Frequently the head of a small town Fire Department is appointed who has not had previous experience in this line of work, (this is wrong but we all know that it is done) and no way of acquiring the necessary knowledge.

On my way home from last year's Florida Fire College I stopped and asked the Chief of a small town department why he had not attended the college. He said: "The Mayor did not think that it would do us any good as we only have one truck and a volunteer department." I told his Mayor that his Chief was just the kind of fellow that we were trying to help. I drew his attention to the fact that they have several three and four story buildings in the town, and a fire in one of these buildings is just as big a fire as if it happens in a three or four story building in a large city, but the Chief in a large city has trained assistants to help him, whereas the small town chief will have to depend on his own personal knowledge, and of course the more he learns the better Fire Chief he will be. We have not got this Mayor in line yet, but we will have before the next College.

Every State Should have a Fire College

The time is not far distant when every state in the country will have a Fire College, as the firemen throughout the land have come to the conclusion that there is still much to learn about fire fighting and fire prevention. Anybody, if he is given enough time, he can learn things for himself, but why take years of observation and practice to learn a thing that specialists can teach us in a short time? It is hard for the officers of the International Association to go into every state and organize, for that reason I recommend that the officers of the International urge the District Organizations to take this over in their respective Districts, so that we can have a fire college in every State before we meet next year.

The fire college has been a success; not only in Florida but in every state that I have any knowledge of.

(Excerpts from a paper read before the annual convention of the International Association of Fire Chiefs at Havana, Cuba.)

After the Havana Convention of the International Association of Fire Chiefs

Upper—S. S. Pennsylvania, carrying Pacific Coast chiefs back home after the Havana Convention, passing through the Panama Canal. Lower—H. J. Treacy, Chief N. Y. C. Fire Department, Bureau of Repairs and Supplies; Mrs. H. J. Treacy; Mrs. J. J. McElligott; Mrs. J. J. Spencer and Asst. Chief J. J. McElligott, all of New York City.

Mobile Asks for New Fireboat

Chief Gus Rhem of Mobile, Ala., in his annual report, included a request that the city order the construction of a fireboat for the protection of waterfront property. He also asked that a new fire station be erected during the coming year in the Woodstock school district and that a 75-foot aerial ladder be purchased to be housed in the Matt Sloan Central Fire Station. The Chief suggested that a new house be erected in the vicinity of Davis Avenue and Kennedy streets and urged that the two-platoon system be established.

During the past year the department received 1,527 alarms. Of this number, 133 were false alarms. The fire losses for the year were less than ten per cent of the property value involved in the fires.

Box 52 Re-Elects Parker

P. Hildreth Parker was re-elected president of the Box 52 Association of Boston, Mass., at the annual meeting which was held recently. The other officers chosen were: Frederick W. Kurth, Vice-President; George W. Austin, Treasurer; Harry J. Rockett, Secretary; Frederic Blake, Assistant Secretary; and William E. Dolan, C. Elmer Gane, James W. Moulton, Albert W. Daniels, and William B. Corcoran, Executive Committee.

At the November meeting the scheduled speaker was Frank R. Bradford, Director of Safety and Fire Protection of the Boston and Maine Railroad. The monthly luncheons of the association at the Boston Chamber of Commerce are being continued and are well attended.

HARRY BELKNAP.

The Volunteer Fire Department

By N. N. WOLPERT,
Assistant Editor, FIRE ENGINEERING

A Series of Articles on Volunteer Fire Department Administration and Operation.

Cellar Nozzle Drills and the Use of Lines in Lowering Firemen

This article, the fourteenth of a series, describes evolutions to accustom firemen in handling cellar pipes, and also touches on the use of rope lines in lowering firemen.

CELLAR fires are difficult to fight unless the department has a cellar pipe which is designed to throw a stream of water into the space below the street level. As cellar fires often prove troublesome, it is well to train the men in the use of these special pipes so that they may know what to do when faced by such fires in the field.

In the drill for connecting and operating a cellar pipe, six or seven men beside the officer may be used. The evolution consists of stretching two lengths of 2½-inch hose attaching the line to a hydrant, placing a Baker or Hart cellar pipe on the other end of the hose, and then placing the pipe in position on a platform before a call is given to start the water. The platform is used in order to parallel actual service conditions, and should be about seven feet in height. The hole cut for the cellar pipe should be about ten inches in diameter. In actual operation, the hole should be cut square.

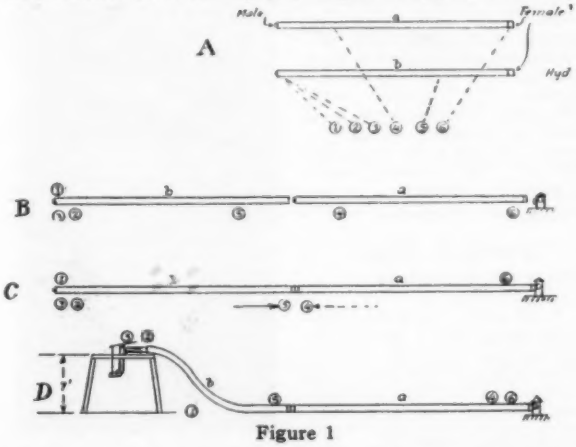


Figure 1

Two lengths of hose are placed on the ground and the men take their positions as indicated by the numbers. At the command of "Go" No. 1 takes the male end of section *b* and No. 5 takes his position about one-third of the distance from the female end on Section *b*. Fireman No. 2 takes a position alongside of No. 1.

Fireman No. 3 takes the cellar pipe and both No. 2 and No. 3 follow up the nozzle end of section *b*. No. 4 takes his position one third the distance on section *a* from the male coupling, and No. 6 has his position at the female end of section *a*. Firemen 1, 2, and 5 take section *b* to the left as shown in Fig. 1. Firemen 6 and 4 take the section *a* to the right as shown. When the section *a* is in position for connecting it to the hydrant, the men step with that section while section *b* continues on until the male and female couplings are in line to be connected. No. 4 and No. 5 take positions at the couplings of the two sections. Firemen 1, 2 and 3 stand at the nozzle end of section *b*, and put on the cellar pipe. No. 3 makes the connection to the hydrant, and if another man is available he assists in this work.

As soon as the line is connected and the cellar pipe is in position, then the cellar pipe is taken to the platform and No. 2 and No. 3 take their position on the platform while No. 1 hands up the cellar pipe and after that, he assists in lightening up on the hose until the pipe is in position to be operated by the firemen.

Firemen 2 and 3 make sure that the cross bar is properly adjusted to take the weight of the cellar pipe. When everything is set, No. 6 turns on the water at the hydrant. However, before water is turned on, No. 2 and No. 3 must make sure that the shutoff at the pipe is open.

In Fig. 2 are shown some of the common mistakes in operating the cellar pipe. At E the nozzle is directed at too high an angle, and in the case of the nozzle being near a beam, the stream is actually prevented from reaching any of the fire as it is broken on the beam. To overcome this fault, the nozzle should be directed at a lower angle.

At B is shown the case where the narrow range is secured by operating the nozzle at too high an angle. The water rebounds and covers only a small area from the nozzle.

How the range may be increased by lowering the nozzle is shown at C. Not only is the range increased between the points where the water leaves the nozzle and where it strikes the ceiling, but the rebound is also increased in like proportion.

At D is shown how a maximum range can be secured from a cellar pipe. In this case, the nozzle is so placed that the water just clears the ceiling and continues on in its initial flight. It is in this point that the cellar pipe is superior to the distributor; it has a greater range which is a great help in the case where a cellar is involved by fire over a large area.

Best results with a cellar pipe are secured by continually manipulating the handle of the pipe so as to keep the stream spreading over a large area and not continually striking in one direction. The handle lever should also be raised or lowered to increase or decrease the range. It is only by operating the handle up and down as well as sideways that all of the burning area may be covered.

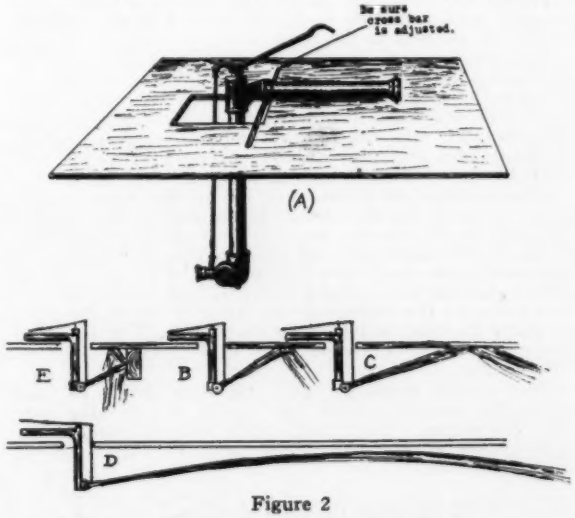


Figure 2

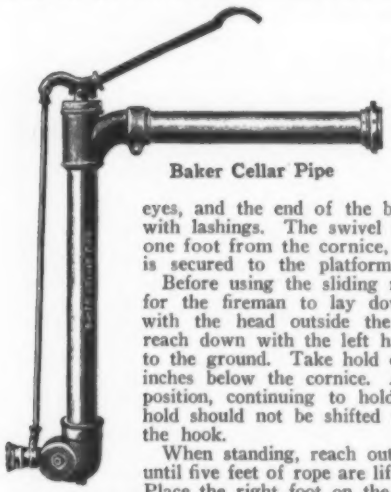
Where the Bresnan or the Bonner distributor is used, a gate valve is provided for the connection to the section of the hose to which the nozzle is attached. Usually this section is eight or ten feet long. The evolution for connecting the distributor is very much the same as the one in operating the Hart cellar pipe but Fireman No. 2 carries the gate valve, or the piece of hose with which the gate valve is attached.

In a previous chapter was described some of the common knots for Fire Department work. Some of the more common applications of these knots will be outlined so that this point may be covered in drills.

Roof rope has been used for making escapes at fires. For this work, all roof ropes and sliding ropes should be of hemp ⅝-inch in diameter. Life belts are always used in conjunction with scaling ladders and sliding ropes. When the belt is buckled on the body, the snap in the hook should face the left side. The rope is lowered from the roof on the outside of the building until there is ten feet of rope in the street or yard. The upper end of the rope is made fast to some stationary support with a bowline or other approved knot. The knots used for all rope work are the half hitch, rolling hitch and the bowline.

If a building is used for drilling purposes, a special platform is built on the roof about eight feet wide with holes provided to make the rope fast.

To prevent the rope from kinking or unraveling from use, a double eye swivel is used. The end of the rope on the roof is made fast to one eye of the swivel and a short piece of rope about eighteen feet long, to the other eye. Small bowlines are used in securing the ropes to the swivel eyes, and the end of the bowlines are secured with lashings. The swivel is kept on the roof one foot from the cornice, and the short rope is secured to the platform.



Baker Cellar Pipe

Before using the sliding rope, it is necessary for the fireman to lay down on his stomach with the head outside the cornice, and then reach down with the left hand, thumb pointing to the ground. Take hold of the rope eighteen inches below the cornice. Arise to a standing position, continuing to hold the rope and the hold should not be shifted until the rope is in the hook.

When standing, reach out with the left hand until five feet of rope are lifted over the cornice. Place the right foot on the rope at the cornice to prevent the rope from sliding back to the ground. With the right hand take hold of the hook on the belt, bringing the snap in the hook to the rear.

When making turns with the rope around the hook, the left hand is brought close up to the hook and the rope is placed inside and behind the snap of the hook, close to the neck. The left hand is turned to the right until two full turns are made with the rope around the hook. When the turns are made, the hook is locked and dropped to the side, and the foot is taken off the rope and the cornice.

In going over the cornice and out on the rope to slide down, lay down on the stomach, take hold of the cornice with both hands, allowing the rope to be between the arms. Swing out with both feet until they are outside the building. Take hold of the rope with both hands and lower the body on the rope until the rope in the hook is taut. Slide the right hand down on the ropes until the hand is behind the right hip where the hand is kept while descending. The left hand grasps the snap of the hook so as to keep the snap closed while sliding.

When sliding down the rope, the eyes should be kept toward the ground and the legs spread to guide the body while descending. The speed of the body is regulated by opening and closing the right hand, the rope passing through.

Sliding Down Life Lines

In landing, the fireman sits down in the net, removes his hands from the hook and the rope and takes hold of the rope above the rope thereby pulling himself up to a standing position. This is done to get sufficient slack rope to take the turns off the hook. The turns are taken off simultaneously by taking hold of the hook with the right hand, bringing the snap of the hook to the rear, the left hand taking hold of the turns on the hook sliding them off.

Where firemen slide in pairs, the man who slides from the roof takes hold of the rope, makes the turn in the hook and gets out on the rope in the same manner as when sliding down alone, except that three turns around the hook are used instead of two, as described.

The man to be taken down places himself on the top floor window, directly in line with the rope, and he sits on the sill so that his feet hang out. When the man on the rope descends to a point opposite the window, the man in the windows grabs the legs of the one on the rope and draws the fireman into the window where the fireman assumes a sitting position on the lap of the man in the window. Both legs of the man on the rope straddle those of the man seated on the window sill. The two men are face to face.

As soon as No. 1 (the man who descended from the roof) has straddled No. 2 (the man seated on the window sill), No. 2 takes hold of the hook of No. 1 with his left hand, and with the hook on his own belt with his right hand, and he secures his belt hook into the hook on the belt of No. 2. Man No. 2 then places his arm about the rope and the body of No. 1, locking his hands behind the back of No. 1.

When thus secured, No. 2 pushes himself free from the building and No. 1 regulates the descent by tightening or loosening his grip on the ripe with his right hand. A glove or other protection should be worn on the right hand when sliding down a rope.

W. Grove, Chief of Hannibal, Mo.

William Grove has been selected the new Chief of the Hannibal, Mo., Fire Department to succeed the late T. B. Parks.

He was born January 24, 1863. For nine years he served in the volunteer organization which at that time boasted of a hand drawn apparatus. For twelve years, Mr. Grove was a minute man receiving a salary of $120 a year. He has been a regular fireman for twenty-seven years.

Chief William Grove,

Federal Plan Suggested

A program for the protection of timbered lands has been suggested by F. H. Cowles, Fire Warden of Santa Barbara, Cal. He suggests the recruiting of a Federal army of 25,000 trained forest fire-fighters for the four heavily timbered western states and for New York. The army is to be divided into detachments placed twenty-five miles apart.

Mr. Cowles has pointed out that the employment of men by the hour for fighting forest fires has placed the Government in partnership with crime. Several arrests have been made where men deliberately started fires to provide them with employment, even though temporary.

Mt. Vernon, N. Y., is completing the construction of a drill tower where the firemen will be trained.

Plans are being made for the 1932 convention of the New Castle County Firemen's Association which will be held in Wilmington, Del., September 21 and 22.

All of the fifteen fire wardens in Cleveland, Ohio, have been given police power as a means of cutting down on the number of arson fires.

An ordinance recommending the prohibition of wooden shingles on roofs throughout the city limits of Waterbury, Conn., has been recommended by the National Fire Protection Association.

Contracts have been awarded for the construction of a new fire station in the Logan section of Philadelphia. The house will be constructed of brick. On the second floor will be located the dormitory, recreation room, and company offices.

Seventy-five firemen attended the one day fire school held in the central fire station at Ottumwa, Ia. The school was in charge of Capt. H. E. Jurgensen, Fire Department Instructor of the Ohio Fire Inspection Bureau.

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

BECAUSE of the changing property values, and the shifting about of population within a city, each municipality has a number of old structures which are fit to be condemned. They are buildings which are no longer considered of value by their owners, and consequently the property owners do not feel that they should incur added expense in having the structure taken down.

While such buildings are standing, they are a menace to the passersby and they constitute a serious fire hazard. Young boys are tempted, because of the apparent worthlessness of the material, to start bonfires near the vacant property, or even within the building itself.

When a building is in a dangerous state, it is ready for condemnation proceedings.

The problem in full is printed in the box on this page. In the box on the following page is the question that will be treated in the next issue. Should you have some comments that you would like to add to the next discussion, you are invited to write to the "Round Table Editor," FIRE ENGINEERING, 24 W. 40th Street, New York, N. Y.

HERE IS THE PROBLEM

What steps do you take when it is necessary to condemn a building?

Where the owner brings the case to court, how do you handle the situation?

Do you generally find that the public is against your orders?

Discussion of the Question

Very little opposition to the customary request for the removal of old buildings has been reported by the fire chiefs. Some have never taken a case to court. The replies that have been received follow:

Thomas H. Shipman, Chief, New London, Conn.: In the past few years we have condemned some 25 buildings in this city.

My procedure has been to inspect the building with the Building Inspector at the same time taking pictures that can be used in Council or Court. The purpose of the inspection is to ascertain if the building is a fire hazard or decayed more than fifty per cent of its value.

If the above mentioned conditions are found I make application to the Council that said building be condemned. The Council then votes to inspect the building in a body. At their next meeting the owners are given a hearing, the Fire Chief and Building Inspector being present. After the hearing, if the Council decides in favor of condemnation, the owners are notified that the building must be demolished within a certain number of days, as prescribed by law.

If the owner brings the case to court it is turned over to the City Attorney who carries the case through to its conclusion, the Fire Chief and Building Inspector then have to prove their case in court which of course makes it much harder.

In nearly all cases I have had in New London, the Press and Public has been in favor of my action.

C. E. Foster, Chief, Astoria, Ore.: When it becomes necessary to condemn a building we serve a notice prepared for us by the city attorney on the owner requesting the removal of same. If he does not follow the order the city tears it down and the cost of the labor is placed as a lien against the property.

As a general rule our requests are complied with. We do not condemn a building unless there is good reason for it.

We have never had the matter taken into court so far, nor do we have trouble with the general public in this matter.

W. S. Knight, Chief, Salt Lake City, Utah: The Chief of the Fire Department together with the Chief City Building Inspector have jurisdiction over the condemnation of buildings, backed by the authority of the City Commission. Subject to the rulings of the City Law Department, notice is served upon the owner of the property condemned, after a thorough inspection and investigation of the complaint made.

Thus far in our experience, no owner has brought a case to court.

Generally speaking we have received very good co-operation from the public in complying with our requests.

William Daggett, Chief, Springfield, Mass.: If the building through some accident is "dangerous to life, limb or the adjoining property," the building commissioner has authority to condemn it, order it vacated and taken down or made safe, or by observing certain formalities, he can use such assistance as he needs to make it safe, or if circumstances require it he can have it demolished.

If a building is obsolete, falling into decay or dilapidated, the Building Commissioner usually writes a letter to the owner or to whoever is interested, calling their attention to the condition of the building, its uselessness, its fire hazard and menace to the neighborhood. Such buildings are usually being carried away a piece at a time by vandals. Even dilapidated buildings have some value if taken down in time.

Whenever possible, the owners themselves are prevailed upon to take down such buildings. The Fire Prevention Committee of the Safety Council uses its influence to get rid of some of these derelicts.

Neither we nor the owner have ever taken such a case to court. We feel that we can accomplish more by not pushing a thing too fast.

In getting rid of old buildings we do not deal with the public, but with the individual owners. They have in most cases, shown a very good spirit and have cooperated with us to the extent of getting rid of approximately one hundred and sixty old buildings during the last three years.

H. A. Griffen, Chief, White Plains, N. Y.: I am quoting you Section 231 of the White Plains City Charter:

"Powers of Common Council as to Removal of Dangerous Buildings and Fences. Whenever, in the opinion of the Common Council, any building, or any part thereof, is liable to fall down, whereby persons or property may be endangered it may order any owner or occupant of the premises on which such building, fence or other erection stands, to take down the same or any part thereto, within a reasonable time, to be fixed by the order, or immediately, as the case might require: or may immediately, in case the order is not complied with, cause the same to be taken down at the expense of the owner of the premises, which expense may be sued for and

recovered of such owner or occupant, and shall be a lien and charge until paid on the lot on which such erection stood. Such order shall be served on the owner or occupant personally, or by leaving it at his residence, if he resides in said city; if he does not reside in said city, then in such manner as the Common Council may direct."

We have not had a case where the owner had to be brought to court.

Earl J. Reynolds, Chief, La Porte, Ind.: Nearly everybody wants someone's building torn down, until it happens to be their own. We don't pay much attention to the first or second complaint other than make a note of it, and look the building over. Upon the third complaint we make a check-up on our notes. After we have three or four houses in this condition we send to the State Fire Marshal's office for an inspector. We go with him to the building and interview the owner. In some cases, the owner will promise to tear it down. In the case where an owner will not tear down the building he is served with a notice to remove the building that is condemned. This notice allows from 30 to 90 days to tear down and remove all rubbish.

With one exception in the past three years, all have complied with the order. In this one case the State will probably hire some one to tear it down and add the cost to the tax duplicate.

Of course property owners have the right of appeal, and if they do the State sends another inspector and in most cases, if possible, owing to the condition of the building will recommend a remodel order. In the majority of cases, however, this remodel order will cost too much and the owner will be glad to abide by the original order.

Of course owners naturally do not like to tear down a building, but after being shown the risk to themselves and neighbors, usually tear it down without any further trouble.

J. I. Fetters, Chief, Mishawaka, Ind.: It is necessary when condemning a building to bring the matter to the attention of the State Fire Marshal and his office handles it. Usually hazard reports are made out, first signed by the Chief of the Fire Department, which brings an order for the State Fire Marshal's office.

In court these cases must be handled by a representative of the State Fire Marshal. Reasonable orders given here have been generaly executed, former opposition is becoming weaker.

James M. Casey, Chief, Cambridge, Mass.: When condemning a building we notify the owner and if he does not comply with my orders, I notify the Superintendent of Buildings and he orders the building removed as he has the power to have it removed, after a committee composed of the City Engineer, Chief of Fire Department and Building Contractor so recommend.

When the owner of a building brings the case to court, we appear as a witness. The public usually complies with our orders.

V. H. Steele, Chief, Billings, Mont.: Buildings are condemned under the state laws or local city ordinance. When the State Fire Marshal executes the law he works under the state law. Papers regarding condemning of buildings are filed with the clerk of the district court and a notice is personally served to the owner, if possible.

The County Attorney handles cases taken to court when the state handles the case. When the local laws handle the case, a city attorney appears in court to take care of it. The officers are advised by the attorney to enable them to place the case before the Judge so that the condemnation should be carried out.

Roger Boyle, Chief, Jersey City, N. J.: The usual procedure in condemning a dilapidated and unsafe building is to notify the owner of the building of its hazardous condition and to have same corrected. If he fails within a reasonable time we refer it to the Building Department to take action against the owner. If there is court proceedings, it is turned over to the City Law Department for solution.

The property owners or people living in a neighborhood where there is an unsafe building, usualy approve of its removal.

G. W. Hedden, Chief, Buffalo, N. Y.: The matter of condemning an unsafe building is taken up with the Bureau of Buildings. The Commissioner of Buildings has power to destroy any buildings that are dangerous, and likely to injure people or damage other property. The Commissioner of Fire works in conjunction with the Building Commissioner.

The Corporation Counsel handles the court situation if such be necessary.

In most cases the public is against us. However, like everything else we occasionally find owners willing to listen to reason. Court action generally brings the matter to a head.

William H. Hawkins, Chief, Haverhill, Mass.: A body of three men handle condemning of buildings in this city, they are the Chief of the Fire Department, the City Engineer, and one other appointed by the Building Inspector. The City Solicitor handles cases taken to court.

There have been about 50 buildings taken down in the last two years without one complaint from the owners. Not one case has been taken to court in the last fifteen years.

J. C. Stahlbert, Chief, Ft. Wayne, Ind.: When condemning a building our department inspects the property, secures the legal description and forwards all the information available to the office of the State Fire Marshal. The State Fire Marshal returns the condemnation papers to our office and we serve them on all owners and occupants of the property involved.

In the event the owner brings the case to court, we act as witness in the case and it is handled by the State Fire Marshal's attorney.

In the great majority of cases we find the public are in accord with our action.

S. J. Flores, Chief, Shreveport, La.: The Building Inspector and Fire Chief condemn buildings and order them torn down. We usually get contractors or the builder's views before issuing such an order.

When a case is brought into court we prove that the building is dangerous to life and is a fire hazard.

We don't condemn a building unless it is absolutely in danger of falling down. If this procedure is practiced you will have the public with you.

W. H. Wayand, Chief, Scotia, N. Y.: It has not as yet been necessary for our Department to take any case of building condemnation to court.

The few buildings that have reached a dilapidated condition and have become a fire hazard, were taken down by the owners upon request. The public has always been with the department on these matters.

E. Seymour, Chief, Plattsburgh, N. Y.: When a building is considered a fire hazard it is referred to the Mayor and Alderman of the City Council and from there referred to the Corporation Council who takes action. When a case is taken to court the Corporation Council handles it.

G. E. Swartz, Chief, Elmira Heights, N. Y.: I notify the owner of a building that it is condemned, giving the reasons. This is in turn referred to the Village Board of Trustees.

We have never had to take any such case to court, but if it was necessary, the village attorney would handle it. I get the best cooperation of the public possible in such cases. The people in our village are very fair minded and help the Fire Department to a great extent.

John Ely, Chief, Champaign, Ill.: When condemning a build-

(*Continued on page* 906)

HERE IS THE PROBLEM FOR THE NEXT ISSUE

What procedure do you follow when you discover that you are hampered by high tension wires at a fire?

What method do you follow when you are faced with a broken overhead wire at a fire?

What suggestions have you for improving the cooperation between the Fire Department and the power company for service at fires?

With the Editor

Motor Cars Send In False Alarms

The latest wrinkle in the sending in of false alarms of fire came to light recently in connection with the skylarking during a "Hallow'en" celebration. Some boys in a Massachusetts town, knowing the severe penalties attached to the sending in of false alarms conceived the bright idea of making motor cars whizzing by on the highway do it for them.

The idea was no sooner thought up than it was acted upon. The police, investigating a false alarm which apparently no one had pulled, found the box door wedged ajar by a pebble, and from the hook a strong black thread, well nigh invisible, ran down the pole through a row of staples, across the street, and was tied to the pole on the opposite side. When an automobile passed over the string, which was drawn as taut as possible, the hook was pulled down and an alarm followed.

Propaganda in the schools has very largely put a stop to the dangerous pastime of pulling a box to see the apparatus dash up. This prank is a particularly attractive one to the small boy, for, besides gratifying his inherent love for mischief, it brings out the Fire Department, which is the acme of desire to the young mind. To counteract this tendency, very strong representations must be made in the schools, bringing out the danger to the firemen involved in the procedure. Facts and figures should be given showing that a great number of accidents to fire apparatus and men riding upon them occur when replying to a false alarm. The fact that, while upon this false run, a real fire may occur and precious lives may be lost, owing to the absence of the fire apparatus, should be stressed. The expense to the city and its taxpayers involved in every run of the Fire Department should be pointed out.

If the youngsters can be impressed with the fact that to pull a false alarm in fun may result in the death of members of the department, this cause of the trouble will cease.

Couldn't Find a Coin For the 'Phone

The other day a fire occurred in a Southern college for girls. One of the young ladies had been doing some ironing in her room in a dormitory and retired without the formality of removing the plug from the iron. Later on in the night some of the other students smelled smoke and traced it to the first young woman's room. Bursting in, they discovered that the overheated iron had set fire to a curtain and there was a merry blaze in consequence.

While some of the girls tackled the fire others sought to send in an alarm. But here a serious quandary arose. The only means of summoning the city department was by telephone, the only 'phone available was one of the drop-a-coin-in-the-slot variety and—no one had the required denomination of coin of the realm to drop into the slot!

Fortunately, in this particular instance, the students and teachers were able to subdue the flames before the word was finally relayed to the city department that a fire was in progress in the college. But the results might have been more serious, and the reliance by the authorities of this institution upon the telephone alone—and especially one of the slot variety—was extremely hazardous.

If there had been a special box alarm established in the college a moment's delay would not have been necessary. It would have been only a matter of breaking the glass of the special alarm and of pulling the hook—the city Fire Department would have done the rest in short order and there would have been no searching for coins or other delays in transmitting the alarm.

The Chief and the Civic Bodies

A few days ago a news announcement in a local daily read that "Chief ——, of the Fire Department, will talk to the Rotary Club members at the weekly meeting on Thursday evening." This bare item contains much of significance.

The Chief of the Fire Department occupies a unique position in the community, and one of great importance. He is—or should be—recognized as the supreme authority upon all subjects connected with fire prevention, fire protection and fire fighting. He, therefore, should contact as frequently as possible with the citizens as an instructor upon such subjects, which are, it cannot be denied, of paramount importance in the lives of every one of them.

There are many ways in which he can do this. One of the most available is the plan adopted by the Chief mentioned in the item—that is in appearing before the various clubs and associations, civic, religious, social and political, of his municipality. There is a particular advantage in this means of reaching the citizens. In such gatherings he comes in contact with the best and most influential citizens of the city, and, in bringing before them his ideas as to the best methods of avoiding and fighting fire, establishes in their minds certain principles of which he, as an expert, has full knowledge, but which, in the nature of the case, these men, as laymen, could have little opportunity to know. By enlightening them and showing them the best ways of guarding against fire and the proper thing to do when the fire demon does visit them, he can do much toward reducing the fire loss record of his city.

That he will have an attentive and interested audience, in appearing before such associations, goes without saying. The subject of fire safety is too vital a matter to the average citizen, when it is properly brought to his attention, for him to dismiss it lightly. Not only his property, but also the lives of himself and those dear to him are involved. Naturally, the subject, when treated by one who is the recognized authority on it, will have a special significance to the members of the club or association and should result in a large attendance at any session which the Chief is announced to address.

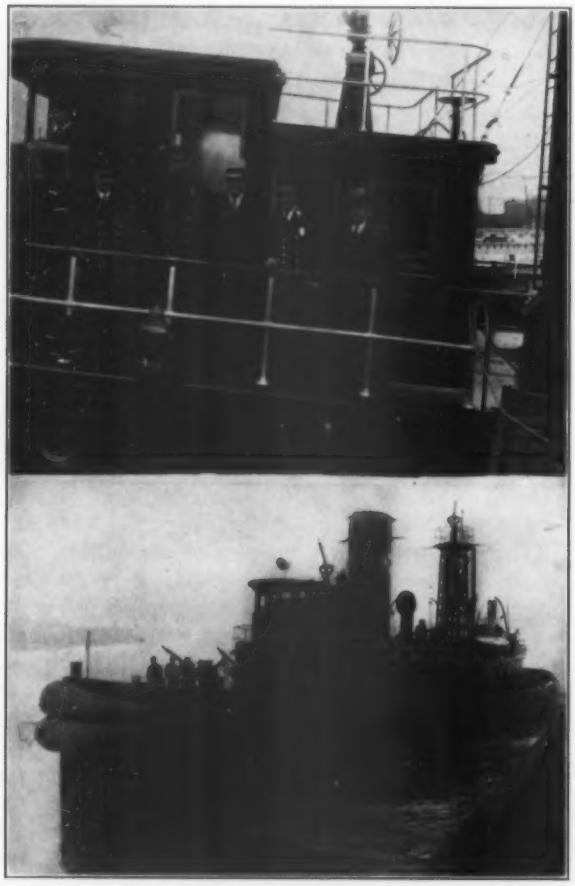
BOSTON'S NEW FIRE BOAT COMPLETES TRIAL TRIP

"Matthew J. Boyle" to be Placed in Service by December 1—Carries Steel Lifeboat and a Pup Tender on its Davits

By HARRY BELKNAP

BOSTON'S new fire boat "Matthew J. Boyle" had a very successful trial trip on November 17 and will shortly be placed in service.

This vessel is an oil burning steamer with a pumping capacity of 10,000 to 12,000 gallons of water per minute at 150 pounds pressure. The hull is of steel and there is a skeleton tower surmounted by a monitor nozzle. There are a total of seven Morse water guns besides twenty hose connections on the deckhouse.



Two Views of the Boston Fire Boat Test

Upper, left to right, Superintendent E. E. Williamson, Chief Henry A. Fox, Fire Commissioner Edward F. McLoughlin, John D. McDonough, Master of Marine Service, B. F. D., and Herbert J. Hickey, Executive Secretary, B. F. D. Lower, the "Matthew J. Boyle" as she left for her trial trip.

Her dimensions are 125 feet length overall; 29 feet, 6 inches beam over guards; and draft of 10 feet, 6 inches. The designers were Fay, Spofford & Thorndike, of Boston, and the builder was the George Lawley & Son Corporation, Neponset, Mass. The two water tube boilers were furnished by Babcock & Wilcox, the four turbine driven two-stage centrifugal pumps by Dean-Hill, and the vertical, direct acting, compound condensing steam engine of 1,100 horsepower was installed by the Atlantic Works of the Bethlehem Shipbuilding Corporation. The auxiliary pumps were made by the Worthington Pump and Machinery Corporation. The total cost of the boat was $326,000.

The construction was supervised by Arthur J. Raymond, Naval Architect, of Fay, Spofford & Thorndike; Edward E. Williamson, Superintendent of Maintenance, B.F.D.; John D. McDonough, Master in Charge of Marine Service, B.F.D.; and Edwin M. Oxner, Vice-President and General Manager of the Lawley Corporation.

In planning this new Boston fire boat, steam operation was adopted in preference to Diesel electric operation because of the saving in first cost which would more than offset the savings possible by Diesel electric operation in a boat actually engaged in fire fighting less than one per cent of the time; because of the difficulty of installing Diesel electric machinery of equal power in the necessarily limited dimensions of the boat; and because of the desirability of interchanging crews, now trained only in steam operation, between the several fire boats of the department.

On board during the trial trip were:

Fire Commissioner Edward F. McLaughlin, Chief Henry A. Fox, Supt. Edward E. Williamson, John D. McDonough, B. F. D.; J. Chester Bailey, Supervisor of High Pressure Service, B. F. D.; Herbert J. Hickey, Executive Secretary, B. F. D.; John Caldwell and Percy Charnock, of the New England Insurance Exchange; Charles McSorley, of the Maritime Association of the Boston Chamber of Commerce; Stephen Whidden, Chairman of the Fire Prevention Committee of the Boston Chamber of Commerce; Harry Belknap, of FIRE ENGINEERING; Captain Charles Lyons, of the U. S. Steamboat Inspection Service; Daniel J. Hanlon, and Walter J. McInnis.

The technical staff included:

Captain F. C. Morey, John R. Whitney, Edwin A. Oxner, W. A. Noyes, W. A. Merrill, and A. B. Morrissey, of the Lawley firm; Arthur B. Raymond, the designer; Carl Hedbloom, of the Atlantic Works, Chief Engineer; J. Howard Hayes, of the Hayes Pump and Machinery Corporation; Frank H. Ellsworth, of the Dean-Hill Company; Edward Colson and Edward Boland, of the Babcock & Wilcox Company; R. M. Cleveland, of the Worthington Pump and Machinery Corporation; W. R. Bell and R. D. Kellegrew, of the Ingersoll Rand Company; Christopher Bertelsen, of the Atlantic Works; Chief Radio Operator J. A. McCarron, B. F. D.; and H. J. Phelen, B. F. D.

The boilers which furnish steam for propulsion and fire fighting are built for a working pressure of 250 pounds per square inch and are fired by eight Todd oil burners. These boilers will supply steam sufficiently in excess of the requirements of the fire pumps so that the main engine may be used for maneuvering without interrupting the fire fighting.

There are four turbine driven centrifugal Dean-Hill fire pumps designed to deliver 2,500 gallons per minute each at 150 pounds pressure; on the trial they delivered a total of 12,147 gallons per minute. The water from the pumps is handled through seven Morse guns of 3,000 gallons capacity

(*Continued on page* 907)

THE COVER DESIGN

The glorious part of fire-fighting, as judged by the public, is the few moments when firemen go rushing up ladders to dizzy heights or when they perform an excellent piece of showmanship. When the major part of the company assignment returns to quarters, the few companies that remain for overhauling are forgotten by the crowds. Such work has no glamour, although it is none the less important, for it is protection against rekindling of the fire.

The cover photograph shows firemen in Chelsea, Mass., overhauling at a junk shop fire. Before these men return they must be sure that all fire has been extinguished. The black smoke emitted by the rubber tires could be seen miles away.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Complex Layouts of Small Hose

To the Editor:

We are equipped with a 1" lead line outfit. We use a 3-way siamese attached to the tip end of our 2½" nozzle reducer outlet. At present we only have 2 lengths of 1" hose 50' long and two 5/16" nozzles. To work this problem do you change your 1" hose to 2½" hose? For example, with 200 ft. of 2½" hose and 1 length 50' 1" hose 5/16" nozzle. E. P. = 120. What is N. P?

Then take same as above but two 1" lines and then three 1" lines, or the third being ¾" chemical hose with ¼" tip. I am anxious to know how to work this out in different layouts, as I am the driver and operate the pump and I am anxious to know the output of the nozzles.

Why is it that on the Hydraulic Book you use 12 ft. to a story in some problems and other 12½ ft.?

P. H. M.

Answer: The method of solving a problem involving 2½" hose reduced to 1" is as follows:

First change the 1" hose to 2½" hose. This is done by dividing the length of the 1" hose by the factor for changing it to 2½", namely .011.

For example, 50 ÷ .011 = 4,545 feet of 2½" hose.

Then add 2½" hose so secured to the section of 2½" hose given in the problem, which gives us the total of 2½" hose in the line. This revised layout is equipped with a 5/16 inch nozzle. Then use your Underwriters' formula for finding nozzle pressure where the engine pressure is known. The factor for 5/16 inch nozzle on 2½" hose is .00095.

Where we have two 1" lead lines from the 2½" lines, change the lead lines into 2½" hose by the above method. When we have changed the two lead lines into 2½" hose, then we change the 2 lines into a single line of 2½" by dividing by factor 3.6. The result is the equivalent length of the single 2½" line equal to the two 1" lead lines. Then add the single 2½" line to the other 2½" hose as given in the problems and the result is the equivalent of a single stretch of 2½" hose. Combine the two nozzles into a single nozzle. This is done by squaring the diameter of each of the nozzles, adding the squares and abstracting the square root of the sum. The result of this procedure will give us the exact size of the equivalent nozzle (equal to the two single nozzles). We must take the nearest standard size to the size so calculated. In this case it is equivalent to a 7/16" nozzle.

The value of K for a 7/16" nozzle on 2½" hose is .004.

Then use the Underwriters' formula for solving for nozzle pressure, which will be the pressure at each nozzle as well as the pressure at the combined nozzle.

Where you have three lead lines, two of them 1" hose and one of them ¾" hose, we must first change each lead line into its equivalent length of 2½" hose by dividing by proper factors. The factor for changing 1" hose into 2½" hose is given above; the factor for changing ¾" hose to 2½" hose is .0029.

After you have calculated the three equivalent lengths of 2½" hose equal to the three lead lines of 1" and ¾", you then average their lengths by adding the three lengths together and dividing by 3.

Next combine the three lead lines (now in 2½" hose) into the equivalent of a single line of 2½" hose. The factor for changing 3 2½" lines into a single line of 2½" hose is 7.75.

After you have found the length of the single line of 2½" hose equal to the three lines, then you add this length to the other 2½" hose given in the problem, which results in the total length of single line.

After this, find the area of a nozzle equal to the three nozzles given, namely two 5/16" nozzle and one ¾" nozzle.

As before, square the nozzle diameters add their squares and abstract the square root. The result will be the exact diameter equivalent to the three separate nozzles. Then take the nearest standard size nozzle to this figure, and you will find that it is ½". In other words, a ½" nozzle is equivalent to the three nozzles given.

Then solve for nozzle pressure, using the Underwriters' formula. The factor of ½" nozzle and 2½" hose is .0062.

With reference to your question regarding using 12 and 12½ feet per story, either figure may be employed. Ordinarily, large office buildings run around twelve and a half feet per story, while certain commercial buildings of the old type run 12 feet or less per story.

Sweeping Compound Hazards

To the Editor:

Will appreciate very much if you will answer the following questions.

Do you consider a floor sweeping compound made up of the following ingredients a fire hazard through spontaneous combustion or otherwise? Also what method do you recommend for storage of this compound?

Sand	10 parts by weight
Fine saw dust	3½ parts by weight
Salt	1½ parts by weight
Paraffin oil	1 parts by weight

Also how often do you recommend that lint in tumblers of laundries be cleaned out, disregarding the fact that the suction fans remove a major portion of the amount. Further, will lint cause fire through combustion?

M. A.F.

Answer: The fire hazard in connection with the floor sweeping compound depends entirely upon the solvent used in the preparation of paraffin oil. If this solvent is of petroleum base there should be little danger of spontaneous ignition. On the other hand, if it is largely of vegetable origin, then there would likely be spontaneous ignition hazards.

With reference to removing lint in tumblers of laundries, no set rule is usually followed. Lint is removed where the quantity present would make it fire hazardous. Clean lint should not contribute to the starting of fires in tumblers where inflammable volatiles are used, although it will aid materially in spreading the fire once it starts.

Pressures on Water Tower

To the Editor:

Will you please explain the following question which appeared in an old issue of FIRE ENGINEERING pertaining to the Battalion Chiefs' examination at New York City on August 8, 1928, which is as follows:

A 1,000-gallon pumper is to supply a water tower 55 ft. high through two lines of 2½ inch hose each 150 feet long from a wye connection on a 3" pumper outlet and is also supplying from its other side a single line of 2½" hose line 200' long with a 1¼" nozzle.

At the water tower 500 gallons are being delivered at 50 pounds nozzle pressure. What will be the nozzle pressure on the single line?

Disregard the friction loss in the tower and wye connection.

K. C.

Answer: The solution of the problem is as follows:

Find the back pressure in the standpipe and the friction

loss in the two parallel 2½" lines of hose from the engine to the standpipe, and then add the nozzle pressure to the back pressure and the friction in the hose line to find the engine pressure. With the engine pressure known, then employ the Underwriters' formula to solve for nozzle pressure on single lines.

Back pressure in the standpipe equals 55 × .434 or 23.9 lbs.

The two parallel 2½" lines of hose are equal to 150 ÷ 3.6 = 41.7 feet of single line of 2½" hose. This single line will then carry 500 gallons per minute (the quantity of water being carried by the two parallel lines).

The friction loss in 2½" hose carrying 500 gallons per minute equals 55 lbs. per 100 feet.

The friction loss in 41.7 feet of hose would then be .417 × 55 = 22.9 lbs.

E.P. = 50 + 23.9 + 22.9 = 96.8 lbs.

Now to solve for the nozzle pressure on the single line:

N.P. = E.P. ÷ (1.1 + K L)

E.P. = 96.8 lbs.

K, for 2½" hose with 1¼" nozzle = .248.

L (number of 50 foot lengths of hose in the line) = 200 divided by 50 or 4.

N.P. = 96.8 ÷ (1.1 + .248 × 4)

= 96.8 ÷ 2.092 = 46.27, or 46.3 lbs. nozzle pressure, approximately.

ADVANTAGES ARISING FROM CAREFUL BUILDING INSPECTION

Officers Should Know Thoroughly Layout of Buildings in Their Districts—Methods of Conducting Inspections—Benefits to be Derived

By H. B. COMPTON

Inspector of Fire Department, Little Rock, Ark.

ONE of the chief requirements of a modern fire officer is the correct and full knowledge of the construction, occupancy, and contents of the different buildings in his district. Without such knowledge he may be compelled to fight fire more or less blindly and may be unable to render the best service in extinguishing the fire with the least possible property loss, and will often be unable to keep the fire from spreading. Also, without such knowledge he may not always know how best to rescue people trapped in the burning building. Furthermore, firemen themselves may become the victims of pitfalls, traps and accidents in buildings which they must enter to fight the fire effectively. A fire fighter knows that he cannot always fight fires in buildings from the street or alley.

The first object is to locate the fire within the building, and one cannot fight fires within buildings intelligently and effectively unless he has a thorough knowledge of the entire structure. He should know the location of all stairways, elevator shafts, light wells, chutes, and other vertical openings through which fire may spread, and which may prove death-traps to firemen. He should know the construction of the walls, partitions, floors and roofs, and the communicating doors between different parts of the building, so as to enable him to promptly take in lines of hose, or to keep the fire from spreading, or for the purpose of rescuing people. If he has knowledge of heating and ventilating systems, which often are conducive to the rapid spread of fire, he will find it a valuable asset.

Often small fires, seemingly checked after a few minutes of work, have grown to disastrous proportions, because the firemen did not know the many concealed spaces, the network of heating and ventilating flues, the many other vertical openings such as chutes, shaft and belt openings, or unprotected openings in otherwise good fire-walls and partitions. Close inspection of each building alone will give this necessary and important information.

Firemen Construct Pleasure Craft

Members of the Sweetwater, Texas, Fire Department have constructed an all steel boat to provide recreation for themselves and their families. It is built of eighteen gauge steel, spot welded. The boat is twenty-three feet long, seven feet wide and draws five and one-half inches of water. It will seat ten persons comfortably. It will be used on Lake Sweetwater, one of the largest inland lakes in the western part of Texas.

Necessity for Close Inspection

Close inspection will give to the firemen a knowledge of the contents of the buildings and the manufacturing processes carried on therein. Intimate knowledge of whether or not unclean conditions prevail, what combustible stock is carried, what explosives and chemicals are stored within and where stored, is essential in fighting fire intelligently and effectively. One course of action is proper where oils are stored, another where shavings, sawdust, excelsior, cotton or readily combustible stocks are carried.

Open elevator shafts, chutes and light wells and weak partitions, walls and roof supports are a menace to firemen in the discharge of their duties. To protect them these hazards must be known in advance. You cannot separate a firemen's life from all danger. Danger is incident to his work, but you can show and avoid many of these dangers and pitfalls by making yourself thoroughly familiar with the various buildings in your districts and their occupancies.

Inspections must be made, first, to prevent fire; second, to fight fires intelligently and effectively; and third, to protect the lives of occupants of building and the firemen who may later be called to the premises. The officers and relief officers particularly, must be diligent students of many things. Mere "throwing of water" no longer is considered intelligent fire fighting. With buildings constantly increasing in size and value, and a multiplication of new fire hazards, the fireman's work demands that he make a scientific study of new conditions as they develop.

Methods of Inspection

A member of the department about to make an inspection should approach the proprietor of the establishment, ask his permission, and see that he thoroughly understands the full purpose of the visit.

When a fireman is detailed from his company to inspect a building in order to acquaint himself with the details of construction and contents, there are several important points that he must take into consideration upon his arrival at the building.

1. What means have been provided to allow the occupants to reach the street level quickly and safely.
2. The accessibility of the building to the Fire Department.
3. The construction and contents of the building.
4. The possibilities of confining a fire to certain parts of the building or to the entire structure.

Carry a small note book with you in which to make notes or draw sketches. Before entering the building, size it up, see whether it is accessible to the fire apparatus; the location of the nearest hydrants; note fire escapes, location and number of standpipe and sprinkler connections, if any. Jot down all these facts on one page of your pad. See whether the fire escapes lead into halls, offices, or work rooms. Notice the type of drop ladder and how operated; read the signs at entrance of building and mark down on your pad the type of business occupying each floor. This gives you some idea of the contents of the different floors. Stop a minute and think what effect a fire among the contents of each floor would have upon upper floors; whether it would endanger the lives of the occupants or of members of your company. Then go to the rear of the building and make a survey as you did in front. Next, enter the building, ask for someone in authority, introduce yourself and state your mission.

Begin Inspection at Roof and Work Downward

Begin your inspection at the roof, because from it you can see exposures of the building, where fire could enter the building or spread to adjoining buildings. Notice the adjoining roofs; whether they could be used in case it became necessary to reach the roof you are on in event of emergency; and whether people on this roof could escape to adjoining roofs or through the windows. Size up the fire escapes; see where they reach the roof; this applies especially to fire escapes of the smoke tower type. Look at the pent house over the elevator or stairways; see if the elevator shaft is sealed at the top by a concrete floor; this will be

(Continued on page 905)

THREE SERIOUS FIRES DEVELOP IN SECTIONS OF NEW YORK CITY

Lincoln Square Building Has Another Three-Alarm Fire—Church in Queens Razed—Calls Sent for Williamsburgh Tenement House

By WILLIAM JEROME DALY

WITHIN a short period of time, New York City has had three multi-alarm fires of major importance—one in the Lincoln Square Building at 65th Street and Broadway, one in a church in the Richmond Hill section of the borough of Queens and the third, which took a toll of five lives, in the frame tenement section of Brooklyn.

Twenty-six fires have been reported for the Lincoln Square Building since 1912. The fire on January 29 called out fifty-one per cent of the apparatus on Manhattan Island. In February, 1925, another unusual fire developed.

The latest fire was in the cellar. The building, nearing the completion of a thorough renovation and fireproofing, was partially occupied by stores, offices and studio apartments. A sprinkler system had been installed since the fire last January, but it was not to be ready for use until two weeks later. The origin of the fire is still undetermined, but it started in the rear of the cellar and was discovered at 4:44 p.m., November 10, among some timbering and flooring. The fire had gained considerable headway in the cellar

Interior of the Auditorium of the First Methodist Episcopal Church, Queens, Which Was Razed by Fire

before it belched its way up pipe recesses and other openings to the floor above. Seven persons were trying to extinguish the flames with buckets when somebody thought to go to the street box.

When Ladder Co. No. 35 and Ladder Co. No. 25 arrived, the fire escapes and windows of the building contained upward of sixty persons. Seven ladders in addition to the fire escape were used to effect rescues. A second and then a third alarm in quick succession brought Thomas F. Dougherty, Acting Chief of Department. He carried with him an extra size distributer, which he designed himself and which is very helpful in fires in ships. The smoke was extremely heavy and it hampered the firemen considerably, but in about an hour the flames were under control, without having reached beyond the street floor.

The building owners at the time were in litigation in the courts over the character of the occupancy. It seems that a former tenant who lost everything in the fire of last January wrote a complaint to the Tenement House Department to the effect that persons were sleeping in the building despite the certificate of occupancy which called for an office building. The Tenement House Commissioner had the premises inspected at midnight and found nineteen studio apartments occupied by persons who made the studios their abode. The Tenement House Department ordered the premises vacated of all persons making their home there. The order was not complied with. The owners of the building sought and obtained from the Supreme Court an order restraining the Tenement House Commissioner from interfering with the tenants until the character of the premises could be adjudicated. Pending the submission of briefs and other legal data, the fire occurred—fortunately at a time of the day when nobody in the building was asleep.

On November 18, Justice Wasservogel in the Supreme Court of New York County handed down a decision requiring the tenants to vacate in obedience to the orders of the Tenement House Commissioner who stated that if the tenants were allowed to remain in the building, then the owner of any commercial building might convert it into semi-dwelling purposes with only one elevator and one staircase.

The artistically minded tenants whose studies and dwelling quarters are one and the same thing, frowned on the apprehension which public officials entertained for their safety. One smock garbed gentleman said: "If I want to stay here and commit suicide by fire, whose business is it? Look—I have ten sprinklers in the ceiling to get me all wet if there should be another fire."

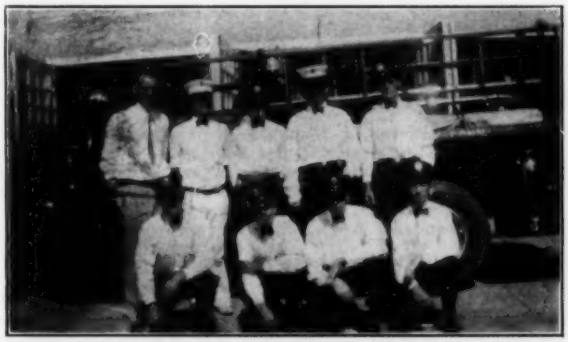
The First Methodist Episcopal Church in the old Morris Park section of Richmond Hill was swept by fire on November 14 at about nine o'clock in the morning. How the fire started has not been determined. An organist was rehearsing for the Sunday services when she smelled smoke. She ran out and shouted an alarm. When she returned the new $250,000 edifice was a mass of flames. Four alarms were sounded, bringing John J. McElligott, Acting Chief of Department, from his headquarters in Manhattan. The flames were given added impetus by resinous pine flooring recently installed. The damage is about $100,000. The smoke made heavy inroads on the firemen, several of whom became ill, in addition to others who were caught in the wreckage of the choir loft when it fell.

En route to the fire, an ambulance and a fire engine collided, sending five firemen to the hospital, but in another conveyance.

The fatal fire at 217 Throop Avenue, Williamsburgh, Brooklyn, occurred in the middle of the night in an old four-story tenement. Reports that it was the work of an incendiary are unconfirmed by Fire Marshal Thomas P. Brophy, who says there is nothing to support that contention, although the origin of the fire is at this writing as yet undetermined.

The fire started in the hallway and like thousands of others, it mushroomed its way and banked against the top floor ceiling. Firemen made scores of rescues. Tenants who succumbed were suffocated as they slept. The hall door was never locked and the blaze might have been started by a carelessly thrown match or cigarette.

Marble Rock, Ia., has purchased a Reo chassis on which is mounted a 400-gallon pumper.



First Aid Crew of the Glenbrook, Conn., Department

The apparatus is provided with an inhalator, blankets, stretchers, first aid kits and so forth for emergency calls. The first aid crew is trained for this special work. Larry C. Georgen, the instructor, is at the extreme left of the group.

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands of dollars.

Week Ending November 13	Loss in Thousands of Dollars
UNIONDALE, N. Y.—Yards of Sigman Lumber Corp., adj. bldgs.	50
AYDEN, N. C.—Bldg. occupied by Free Will Baptist Church	100
CODY, ARK.—Property owned by T. C. Conner estate	40
TERRA BELLA, CALIF.—Property occupied by Cameo Vineyard Co.	25
PASSAIC, N. J.—Factory of E-Z Slipper Co. destroyed	125
STEELE, MO.—Plant of Steele Compress Co. destroyed	200
GREEN CITY, MO.—Property on east side of town square	25
SEARCY, ARK.—Whse. of Searcy Compress Co.	100
SOMERSET, TEX.—Tank of Texas Petroleum Co.	30
CAMPBELL, OHIO—Several business establishments	45
PORTLAND, ME.—Business property owned by Hannaford Bros.	60
BRADDOCK, PA.—Bauman Bros. garage destroyed	25
ALAMO, TENN.—Alamo Theatre, adj. business property	35
ROCKINGHAM, N. C.—McCaskill grocery, adj. dwelling	45
ELGIN, TEX.—Property of W. H. Carter & Son	65
SAN ANTONIO, TEX.—Plant of San Antonio Boot Co. destroyed	45
CHATHAM, N. B.—Walsh Woodworking factory destroyed	70
MILTON, N. S.—Business property destroyed	45
SALINAS, CAL.—Bldg. of National Dollar stores	30
JACKSON, MISS.—S. H. Kress store damaged	45
NORTH BERGEN, N. J.—Auto paint shop, Paterson Ave.	25
QUEENS VILLAGE, N. Y.—Six stores on Rocky Hill Rd.	45
BEAUFORT, S. C.—The Robert Small School, destroyed	25
DETROIT, MICH.—Factory of Atlas Cone & Candy Co., damaged	25
HEMLOCK, N. Y.—Livingston County Canning Co. factory	150
LAKE CITY, S. C.—Tobacco whse. of G. R. Bowen destroyed	35
PARIS, TENN.—Business property owned by Mrs. W. C. Johnson	30
YELM, WASH.—Sawmill of Gruber & Docherty, destroyed	50
REIDSVILLE, N. C.—Residence of Mrs. Chas. A. Penn	80
REEMERVILLE, N. J.—N. J. Agricultural Experiment Station	175

Week Ending November 20	
BENTON, ARK.—Plant of Alaska Lumber Co. damaged	25
CARBONDALE, PA.—Several business establishments	65
EUREKA, CAL.—Plants of Humbolt Times and Humboldt Paper Co.	45
KEY WEST, FLA.—Unoccupied factory bldg., two residences	45
RAVENA, N. Y.—Park Hotel damaged	30
PATERSON, N. J.—Preakness training camp destroyed	25
DECATUR, TEX.—Business property damaged	30
AMORY, MISS.—Shed of Amory Compress Co., destroyed	25
CONCORD, N. H.—Restaurant of Frank Nardi damaged	45
ROSE HILL, N. C.—Several business estbalishments	43
FROST, TEX.—Cotton whse., 1,200 bales of cotton	40
AURORA, ILL.—Isaac Lantz dairy barn and stock	80
UTICA, N. Y.—Business bldg. 200 Columbia St.	50
CINCINNATI, OHIO—Elevator of Early & Daniel Grain Co.	125
JOHNSON CITY, TENN.—Storage plant of Gulf Refining Co.	25
LURAY, VA.—M. E. Church destroyed	50
SELMA, ALA.—Whse. of Pattilo & Russell destroyed	100
CHICAGO, ILL.—Property of Bates Transportation Co.	25
POINT PLEASANT, N. J.—Plant of Manasquan Ice & Storage Co.	65
OSWEGO, N. Y.—Several business establishments	65
SUNBURY, PA.—Bldg. owned by Bassler estate damaged	30
ORANGEBURG, S. C.—Residence of C. A. Stroman, destroyed	25
CINCINNATI, OHIO—Plant of Early & Daniel Co., destroyed	80
LONG ISLAND CITY, N. Y.—Property of Long Island Mill and Lumber Co.	45
PHILADELPHIA, PA.—Plant of Oxford Dye Works, damaged	25
SAN ANTONIO, TEX.—Wolf Bakery and adj. property	35
LANGLEY FIELD, VA.—Three Martin bombing planes	125
SHAUNAVON, SASK.—Store of Hugh Stevenson Co.	80
CARMEL, CAL.—Property of Chas. Sutre estate	80
PLAINFIELD, N. J.—Crescent Avenue Presbyterian Church	200

Relleville, N. J., voted to purchase a 600-gallon Seagrave pumper.

Firemen of Burlington, Ia., have started reconstructing and painting toys to be distributed to the poor children of the community. A number of local organizations are cooperating with the firemen.

High school boys of Wenonah, N. J., out for mischief on Hallowe'en Night, opened five fire hydrants and drained 200,000 gallons of water from the Water Department standpipe before the prank was discovered. The fire siren was sounded and firemen closed the open hydrants. The boys were apprehended.

New York City now has in service its first purchase of centrifugal pumping engines. Nine of them were delivered a week ago by the Seagrave Company, tested and approved for service. They worked continuously for twelve hours in accordance with the terms of the contract. They delivered 700 gallons a minute at 125 pounds and next day made a continuous road run of 20 miles as also provided by the contract. The nine new pieces have been assigned as follows: three in the Bronx, one in Staten Island, three in Queens and two in Brooklyn.

URGED TO PASS ENABLING ORDINANCE FOR LIABILITY ACT

Westchester Chiefs' Plan Asks Villages of County to Adopt Measures to Make Law Fixing Responsibility for Accidents Effective

THE passage by the various village of Westchester County, N. Y., of enabling ordinances, giving authority to the Chief to send apparatus to outside fires, where assistance is needed was thoroughly discussed at the regular meeting of the Chiefs' Emergency Plan of that county, held at Fire Headquarters, Mamaroneck, N. Y., on the evening of Wednesday, November 18. It was pointed out that the act passed through the efforts of the Plan calls for this procedure to insure the working of its provisions fixing the responsibility for injury to firemen and damage to apparatus of the assisting Fire Department on the city asking for help.

Chief D. Wiley Travis,
Peekskill, N. Y., Pres. of the Chiefs' Plan

Assemblyman Gamble, who introduced the bill into the New York legislature, described the necessity for the passage of the local ordinance by the various municipalities in order to allow them to participate in its benefits.

On motion of Chief Gibson, of Mount Vernon, it was voted to instruct the Secretary to send a copy of a suggested ordinance to all of the municipalities in the county, with a communication pointing out the necessity for its passage and urging them to comply with the provisions of the law, thus making it effective.

Three representatives of the Westchester County Volunteer Firemen's Association were present at the meeting, and President Mullen, of the organization, being called upon by President Travis, expressed a desire that the officers of the associations get together at a meeting and consider means of mutual cooperation.

Chief Brennan, of Pelham Manor, said that the aims and objects of the two organizations were so dissimilar that he could see no reason why a spirit of cordiality and cooperation should not prevail between them. The Chair then called upon Chief Towle, of Larchmont, the "Father" of the Plan, to tell the visitors just what its objects were. This he did in a few words. It was finally decided that the officers and directors of the Plan should meet with the officers of the volunteer association and confer on how best the two bodies could cooperate.

The President appointed Captain Dawkins as a committee of one to finally arrange the various zones of the county, whereby the matter of assistance in case of large fires could be arranged upon a systematic basis.

On invitation of Fire Commissioner Merkle, seconded by Chief Gibson, it was decided to hold the next regular meeting at Fire Headquarters, Mount Vernon, N. Y., on Wednesday, December 16, at 8:30 p.m.

There was a large attendance of Chiefs and other Fire Department officers at the meeting.

Reading, Pa., Has New Station

A new fire station has been completed in Reading, Pa., for the Friendship Fire Company. It will replace a building that has been in use for fifty-eight years.

The station is two stories high and it has a large basement. The apparatus room is sixteen feet deep and the ceiling is fourteen feet high. The meeting room occupies the greater portion of the second floor. In the rear are the dormitory, showers, and toilets.

In the rear is a fire tower with exit and areaway for outside entrance to the basement. The State Department of Industry and Labor demanded that the station have the fire tower.

Baer Forsees 8-Hour Day

Fred W. Baer, President of the International Association of Fire Fighters, prophesied that firemen will soon be enjoying an eight-hour day. He said:

"The eight-hour day is coming. At Vancouver where we held the convention, we unanimously passed a resolution favoring it. That was a start. It may be adopted either by action of city councils, referendum votes or action of state legislatures. That the public is in accord with the program is indicated by the fact that out of seventy-two referendums in eight years for changing conditions, either in salaries or hours for the firemen's benefit, only three have lost.

"Learned men have agreed that there should be eight hours of work, eight hours of play and eight hours of sleep for a person. The fireman should be no exception. In addition to providing civilized working conditions for the firemen, it would mean the employment of approximately 25,000 more men. That would help the unemployment problem."

At present only two cities have the eight-hour day for firemen. They are Hibbing, Minn., and Carteret, N. J.

Morris Township Has Coding Sirens

The Township of Morris, N. J., Fire Department has recently installed a code fire alarm system. The entire system was designed and installed under the direction of Thomas R. Pierson, Fire Department Electrician. All of the equipment, with the exception of the special fire alarm switchboard, was furnished by the Federal Electric Company of Chicago, through their New York office.

The special fire alarm switchboard was assembled by Mr. Pierson, the Fire Department electrician and is constructed so that any of the sirens on the outlying fire stations can be cut into the circuit when the code signal is given.

The fire alarm system consists of five Fedelcode No. 1 Fast Code Sirens which are operated from the central fire headquarters. The central fire headquarters have complete supervision over the system and have full control over all sirens, so that any one or more of the five sirens can be operated at a time. These sirens are operated through the central station transmitter, and special switchboard, and is equipped with 57 code wheels giving street locations and six special code calls.

This fire alarm system gives complete sound coverage for Morris Township. When needed, all five sirens are sounded simultaneously, giving the code signal designating the exact location of the fire. If only one fire company is required, the code siren on that particular station is sounded and the others are cut out of the circuit. If two or three are required, the same thing is done. In other words, instead of calling out all fire companies when only one is needed, only that company which is needed gets the alarm, eliminating unnecessary fire runs by the companies not required.

Views of the Headquarters and the Individual Station Equipment

Left—Interior of the fire alarm headquarters showing the transmitter and wheels, punch register, code panel, selective switchboard, clock and teletypewriter. Right—Installation in one of the five fire stations showing the meter service switch fuse panel box, code control panel, auxiliary control panel and the teletype receiver.

Alexandria, La., is planning the erection of a new fire station near the City Park.

Providence, R. I., has awarded a contract for the construction of the new Reservoir Avenue fire station. The house will cost about $35,000.

The volunteer firemen of Bronxville, N. Y., have requested that a new fire headquarters be constructed to cost approximately $85,000.

The Fire Department of Winlock, Wash., has proven to be self-supporting. Not only do the volunteer firemen protect the community against fire, but they do this without cost to the residents or the city.

Nassau County Council Wants School

Fire Chiefs Council of Nassau County went on record Friday night, November 6, as favoring establishment of a school of instruction for volunteer firemen and recommending appointment of a traveling instructor, after the Rev. Joseph R. Alten, had outlined the purposes of the school. The meeting was held in Woodmere Fire Department headquarters and was attended by some 65 Chiefs and ex-Chiefs from about 20 Fire Departments. George Maier, Chief of Long Beach, presided.

Just as the meeting was about to convene the Woodmere fire alarm sounded for a small fire on the roof of a dwelling and several of the Chiefs accepted the invitation to ride on the apparatus. The fire was caused by an overheated chimney. Damage was slight.

President Maier reported on the convention of the International Fire Chiefs in Cuba recently and urged other Chiefs to join since it gave opportunity to meet heads of fire departments from all over the world. He said in Cuba firemen first had to undergo military training and the discipline was at the highest efficiency.

In his talk on the firemen's school, Rev. Alten said the instructor would have to be a man who had been trained in a fire college and held the rank of Chief. The means of financing the school has not yet been determined, he said, because the Board of Educational Extension, under whose jurisdiction it will come, has not held a meeting since the appointment of the new members.

Rev. Alten said the Board of Supervisors showed they were with the Fire Chiefs Council when they appointed four volunteer firemen to the Vocational Educational Extension Board. He also declared the Commissioner of the State Board of Education had given approval to the idea. He asked the Chiefs for ideas and suggestions and when the best of these had been formulated into a workable plan, they would endeavor to set up a school that would be a model for the State.

The next meeting of the Council is to be held at Garden City, January 8. After the meeting, the gathering were guests of the Woodmere department at a supper served in a nearby restaurant.

WILLIAM H. THOMPSON.

A Seagrave aerial ladder has been delivered to Austin, Tex. It replaces a truck that has been in service a number of years.

Firemen of Madison, Wis., have organized their own credit union. It is the object of the new association of firemen to loan funds to firemen in need.

CORRESPONDENCE

Determining Pump Discharge

To the Editor:

I have been reading your valuable magazine for some time and I am always interested in problems on hydraulics on your "Questions and Answers" page.

I have worked out a method for regulating nozzle pressure by use of the speedometer from a few simple tests and calculations and it has proven to be quite accurate. I am passing this information along, trusting that you will see fit to publish it in your magazine.

On many of the late model pumpers the speedometer is driven from the transmission and will register while the pump is in operation; thus by the aid of a chart showing the correct setting for a certain discharge and the correction for slippage, the operator may regulate the nozzle pressure regardless of the length of the hose, size, or elevation.

The following calculations and charts were made for a 500-gallon rotary gear pump of standard make, with a rated displacement of 1.016 gallons per revolution.

To find the discharge in gallons per minute per speedometer-mile, the speedometer was held at 30 miles per hour and a revolution counter was held on the pump gear-shaft showed 553 revolutions per minute. This figure divided by 30 gave 18.43 which was the revolutions of the pump per speedometer-mile, this figure multiplied by 1.016 (rated displacement) gave 18.72 this being the discharge in gallons per minute per speedometer-mile. The speedometer setting was found by dividing the figures in the second column of the chart by 18.72. The figures in the first and second column were taken from the Underwriters Discharge Table.

To regulate the pressure of a ⅞-inch nozzle at 70 lbs. by the use of the chart, the operator will find that the correct setting of the speedometer is 10.0 miles per hour, this will give a theoretical discharge of approximately 188 gallons per minute, a correction for slippage will then have to be added to the speedometer reading according to the reading of the pressure and hydrant guages.

To find the correction for slippage in miles per hour, the pump was operated with discharge gates and relief valve closed and a ¾-inch hose was connected to the suction inlet to furnish the hydrant pressure which was regulated by the adjustment of the pump drain. The discharge pressure was regulated by the throttle and the speedometer registered automatically the corresponding slippage in miles per hour for the various pressures shown by the pressure gauge. For example: With the pump discharge pressure held at 100 lbs. by the throttle and the hydrant pressure held at 50 lbs. by the pump drain valve, the speedometer registered 1.0 miles per hour, this equals a slip of 18.72 gallons per minute, therefore if the pump was operating at 100 lbs. pressure and the hydrant gauge showed 50 lbs. the operator would add 1.0 miles per hour to the speedometer reading shown in the regulating chart.

Very truly yours,

WAYNE SMITH.
Pump Operator, San Quentin Fire Department.

Table for Regulating Nozzle Pressure by use of Speedometer

N. P.	G. P. M.	M. P. H.	N. P.	G. P. M.	M. P. H.
	⅝" Nozzle			1" Nozzle	
30	63	3.3	30	162	8.6
40	73	3.9	40	187	9.9
50	81	4.3	50	209	11.1
60	89	4.7	60	229	12.2
70	96	5.0	70	247	13.1
80	103	5.5	80	264	14.1
90	109	5.8	90	280	14.9
100	115	6.1	100	295	15.7
	¾" Nozzle			1⅛" Nozzle	
30	92	4.9	30	205	10.9
40	106	5.6	40	237	12.6
50	118	6.3	50	265	14.1
60	130	6.9	60	290	15.4
70	140	7.4	70	313	16.7
80	150	8.0	80	335	17.8
90	159	8.4	90	355	18.9
100	168	9.0	100	374	19.9
	⅞" Nozzle			1¼" Nozzle	
30	123	6.5	30	253	13.4
40	142	7.5	40	292	15.6
50	159	8.4	50	326	17.4
60	174	9.2	60	357	19.0
70	188	10.0	70	386	20.6
80	201	10.7	80	413	22.0
90	213	11.3	90	438	23.4
100	225	12.0	100	461	24.6

Correction Chart For Pump Slippage

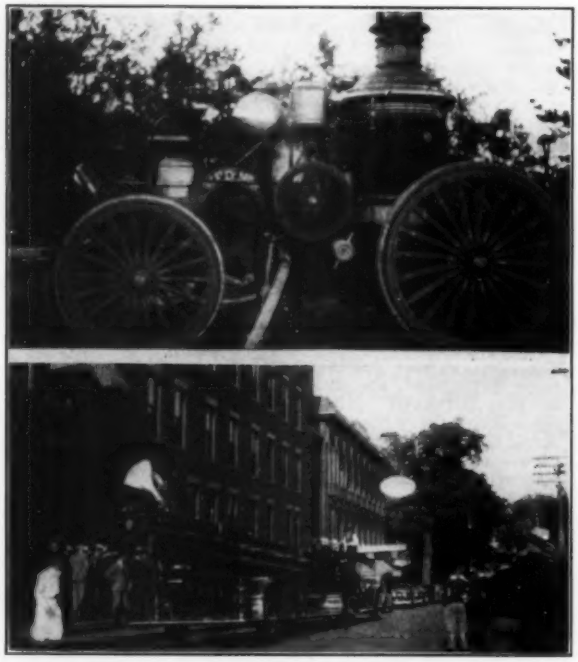
Press. Gauge Reading Lbs. Per Sq. In.	Hyd. Gauge Reading At Zero Slip in M.P.H.	Hyd. Gauge Reading Bet. 5 & 30 Slip in M.P.H.	Hyd. Gauge Reading Bet. 30 & 60 Slip in M.P.H.
80	1.5	1.0	.5
100	2.0	1.5	1.0
120	2.5	2.0	1.5
140	3.0	2.5	2.0
160	3.3	3.0	2.5
180	3.5	3.3	2.7
200	3.7	3.5	3.0
220	4.0	3.7	3.3
240	4.3	3.8	3.5
250	4.5	4.0	3.7

North Carolina Has Forest Fires

Countless acres of timbered land in North Carolina are being destroyed by wide-separated forest fires. The eastern part of the state appealed to Governor Gardner for mobilization of state troops to aid the local fire-fighting forces. Sherwood Brockwell, State Fire Marshal, was sent to Brunswick County where 40,000 acres have been burned over during the past few weeks. Smaller fires were reported in Jones, Onslow, Carteret, Craven and Lenoir Counties in the eastern area. Deer, rabbit and other small animals were caught in the advancing fires.

Edgar M. Heltman has resigned as Associate Editor of *Fire Protection* to become associate editor of the *Starchroom Laundry Journal*. Mr. Heltman was formerly with an advertising and publicity agency.

Delivery of Luverne fire apparatus has been made as follows: 300-gallon pumper, Luverne equipped on a Dodge chassis; Luverne equipped chemical and hose combination on a Chevrolet chassis to Glencoe, Minn.



A Study of Fire Apparatus of Two Periods

At a recent fire, the old La France steam fire engine, illustrated in the upper photograph, demonstrated that it was still capable of fighting fires. It was sold in 1890 to Worcester, Mass., and later became the property of a tobacco company. As a contrast the lower photograph shows an American-La France aerial ladder that has just been delivered to Middletown, Conn.

Advantages of Building Inspection

(*Continued from page 900*)

useful to know in case you have to provide ventilation. Look over the side of the building to see where windows are located in the elevator shaft. Make a note of this, for it will be useful in case you are called to ventilate the building. Examine the standpipe connections to see if they are in good condition. See if there are any dividing fire walls; if so, make a note of this fact. You may find fire walls below and, in some cases, they extend only to the top floor or to the attic.

If the building is sprinklered, look over the shut-off on the gravity or pressure tanks and see if the gravity tanks have the proper amount of water, and if there is proper air pressure on the pressure tanks. Then start downstairs, noticing if stairway and hallway are obstructed in any manner. If so, make a note; this is a life hazard and must be reported. Observe whether elevator shaft is open or enclosed; if open, whether it opens into the floor direct. If so, it would add to the danger of fire and smoke mushrooming on that floor. Notice if the stairways are enclosed or open. If enclosed, whether by combustible or incombustible material, such as wooden partitions, etc. This is important to know in case of fighting a fire on this floor or escaping downstairs. Note if the locations of fire escapes are properly marked, or if they are obstructed in any manner.

See if there are any openings connecting the various floors, other than the stairway and elevator shaft, as such openings would allow the fire to spread to upper floors, or burning embers dropping through the holes would permit the fire to communicate to lower floors.

Watch Out for Extra Hazardous Condition

Enter the floor proper and see if contents would be extra hazardous in case of fire; and if chemicals, acids, or inflammable materials are used, or whether the contents would hold or absorb water, adding to the weight on the floor. Make a note of the contents as well as the manufacturing processes; if in doubt as to its hazardous nature, you can look up data on it later. Notice the number of people employed on the floor and what provision is made for their escape in case of fire. Notice the types of fire doors (if any), and whether blocked, open, or inoperable (you will sometimes find sliding doors off their tracks); also see if they are equipped with fusible links and weights.

If any dangerous conditions are found, make a record of them through proper channels.

Note Storage of Goods, Obstructions, Etc.

A knowledge of firedoors will be invaluable later if you are trying to confine a fire. Note whether aisles are obstructed; if so, make a note and report it through regular channels later. Observe distance between top of goods stored and sprinkler heads; goods should not be piled too close to sprinkler heads. If the floor is sprinklered, see if the system is equipped with a floor control and drain valves, noting location of these. Size up stock and see if it is placed on the floor or raised above it; this is to see in what manner efficient salvage work can be done (if such work is done by your department). If building is equipped with floor scuppers see that they are not obstructed. Note if there are any floor openings from floor below, such as belt conveyors or package chutes.

Then go to the lower floor, start in hallway and proceed with your inspection just as you did on the upper floor and continue down on each floor to the cellar or sub-cellar. Notice if the ground floor has basement pipe inlets, and if they are blocked by merchandise, etc., sometimes these inlets can be observed from underneath to advantage. Locate cellar stairway and outside openings, if any. Locate main sprinkler control and drain valve; gas and electric shut-offs, ammonia shut-offs and diffusion valves. Look for tunnels or entrances from one building to another. On leaving building, observe the best way to enter it, especially at night.

If a fireman knows the contents of a building, whether extra hazardous or not, what effect fire or water will have on them; or whether or not contents will absorb the water and add to the weight of the floors, he can use this knowledge in case of fire in placing his lines to prevent the fire from reaching the contents. Moreover, there may be a great deal of valuable machinery or apparatus in the building which he could protect, or could inform the salvage officer on it so that it might be protected from excessive water damage. Also, knowing the location of heavy machinery or if the materials on the various floors will absorb the water, he is on guard for overloaded or weakened floors.

Many a fire has gotten away from a company because the officer, or relief officer, did not know all the vertical openings in the building, and the fire in the meantime passed through vertical openings to the upper floors or roof.

The great difficulty in fire problems is properly analyzing of the conditions present. Once firemen are familiar with the proper method of analysis, one of the hardest obstacles to the knowledge of conditions at a fire will be removed.

Great Benefits from Building Inspection

The practice of building inspection is of immense benefit to the Department, and assists in getting fires speedily under control. When fire breaks out, a fireman who is familiar through inspection with a building in his district can more quickly secure an entrance by reason of his knowledge; can reach the stairs and elevators more readily and can have connections to standpipes made more quickly thereby saving time in getting in operation at the seat of the fire.

Such a fireman will know where the fire is most likely to be; where it is probably traveling, and location of exposures. He can then promptly cover them. He can also locate exits in order to provide a line of retreat for his men in case of danger.

He will know something of the age of the building; what degree of fire it is likely to withstand before collapsing; what weights the floors will have to bear—tanks, safes, machinery, or fibrous material that absorbs water. He will know if the contents are explosive, inflammable, smoky or fume-giving and can take the proper precautions. In short, he will know at the start the possibilities of the fire without having to make a survey or "size up" of the conditions present.

It is always well to keep in mind that no matter what the construction of a building may be, the contents play a very important part in the spread of fire. Hence a blaze might act entirely different in buildings of similar construction if the contents vary widely. Therefore, the construction and contents must both be given equal weight in determining actions during a fire.

The fireman who does inspection work must use his head, must be able to absorb details quickly, and must have a good memory to retain the points he has observed.

(From a paper read before the annual convention of the Arkansas State Firemen's Association.)

Colorado Firemen Hold School

The Northern Colorado Fire College, sponsored by the Northern Colorado Fire Chiefs' Club, held its sessions in the City Hall, Fort Collins, Col., October 29-30. Mayor Hartman as President of the Colorado Municipal League, welcomed the firemen. To this, Chief Patrick, of Laramie, Wyo., responded.

At the Thursday morning session, Chief T. P. Treadwell, of Fort Collins, outlined the purposes of the Fire College. Chief Frank J. Spillane, Drillmaster of the Denver Fire Department, discussed ventilation as a factor in fire fighting. Prof. H. B. Van Valkenburg, of the University of Colorado, gave an interesting talk on "Hazardous Chemicals," and he used laboratory equipment to illustrate his talk. The morning session ended with a talk by Herman P. Ruthernburg, Denver, arson investigator of the National Board of Fire Underwriters.

In the afternoon there were demonstrations at the Fire Department drill tower.

The following talks were given on Friday:

"Fire Stream Characteristics," by D. G. Mulligan, Fire Protection Engineer, Mountain States Inspection Bureau. "Fire Prevention by Fire Departments," by Chief P. J. Boyne, Fire Prevention Bureau, Denver Fire Department. "True and False Questions," by Capt. John Cutshaw, Denver Fire Department. "Discussion of Fire Department Problems," with Chief J. H. Patrick of Laramie, Wyo., as leader.

On Friday afternoon, the Fort Collins Fire Department gave a pompier ladder demonstration and there was a program at the drill tower.

Frank G. Hitchcock, once Chief of the Council Bluffs, Ia., Fire Department, died at his home at the age of seventy-one. He was appointed head of the department in 1914 and held the post until 1924.

The annual meeting of the Badger Firemen's Association was held in Cedarburg, Wis., October 25. George Kuehltau, West Bend, is President and George J. Armbruster, Cedarburg, Secretary.

The Round Table

(*Continued form page* 896)

ing or part of it, I issue a state order. I turn it over to the State Fire Marshal. We work hand in hand and through this good cooperation we have never had to take any cases into court. Incendiary fires are the only ones taken into court. The administration and business men are always with us on any of our recommendations. I have thus far had good success in such matters.

R. O. Mesnar, Chief, Canton, Ohio: We have no building code here concerning the condemning of buildings. In the past I have taken the members of the Fire Marshal's office out from time to time to look over unsafe buildings. They have condemned about 150 buildings here all told but they accomplished practically nothing because they did not follow up the orders they issued. I have copies of these state orders on file in my office and they cover a period of time as far back as 15 years.

The State of Ohio has no laws by which buildings can be razed. I have taken down a number by working the "Bluff racket."

E. D. Kenyon, Chief, Turtle Creek, Pa.: When we must condemn a building we call the County Fire Marshal. The County attorney handles all such cases taken to court. It is about a 50-50 proposition with regard to the public.

Wm. J. Grove, Chief, Hannibal, Mo.: If the owner, agent, occupant or other party interested in an unsafe structure, having been duly notified, shall refuse or neglect to comply with the requirements, within the time limit, then a careful survey of the premises shall be made at once by three disinterested persons. A report should be made out and served the owner. If he again fails to comply with the order the Mayor and City Engineer serves the owner with a notice to fill the requirements necessary to make the building safe. After these steps have been taken and the owner still does not take action he is arrested for maintaining a nuisance and is held under arrest until the building has been made safe. The penalty is not less than ten dollars and not more than one hundred. We have never had to force a case here as yet.

Jethro Gibbs, Chief, Montclair, N. J.: An ordinance providing for the removal or destruction of any building, mill or structure which is or may become dangerous to life or health or which might tend to extend a conflagration takes care of the condemning of dangerous buildings in our city.

The buildings are inspected by the Chief, Capt. Fire Prevention Bureau and an Inspector of the Building Department. If we find the building a menace the owner is given two weeks notice to wreck the building. If it is not down in the given time the matter is turned over to the legal department.

The public has never interfered with our recommendations but in some cases the owners have objected, but our recommendations have been carried out, however.

W. J. Mohr, Chief, Santa Monica, Cal.: To condemn a building, the general condition is taken into consideration, whether health, fire or building department has jurisdiction. Then the information is placed before the City Commissioners who take such action that they deem necessary.

It has been our experience that the owner is usually glad to cooperate with us, unless the property is involved in litigation, which is most times the case in our experience. Then years pass before results are gained. This the general public does not appreciate—it criticizes the officials for not doing their duty.

Alton Mackey, Chief, Longview, Tex.: When condemning a building I get the city attorney to write a legal notice from our ordinance and we both sign it.

We have been very fortunate thus far never having to take a case to court. If it is possible I make a personal examination of the building with the owner. They usually comply with all our orders.

Albert C. Melendy, Chief, Nashua, N. H.: In condemning a building I use a little persuasion, that is I try to point out to the owner of the building why I believe it should be removed. I have found that it works out in most cases. I have not had a great deal of experience along this line, as I have only been Chief since May 1, 1931. During this time, however, I have had eight buildings removed and there are five being removed at the present time. I have not been required to fight a court case as yet. We have an ordinance pertaining to buildings which the Chief thinks a fire hazard, and I find that the public in most cases are with us. They usually want to cooperate with us with regards to fire hazards.

John Marks, Chief, Valparaiso, Ind.: After inspecting a building and we find that it needs remodeling, the owner is given 60 days to obey the order. If no attempt is made to comply with our orders the building is condemned and turned over to the Deputy Fire Marshal. Thus far we have not had very much trouble along this line.

I had one case, however, where the deputy condemned a place and the case was taken to court, the state marshal had the case dropped and the building still stands.

The public generally is with me in cases of this sort.

C. E. Underwood, Chief, Manistique, Mich.: The condemnation of buildings is always handled through the State Fire Marshal's office. We have never had to take a case to court. The public has never been opposed to our orders, in fact, we usually find them greatly in favor of same.

Harry Whiteside, Chief, Beatrice, Neb.: When we believe a building is in an unsafe condition we send notice of the location and number of the building to the State Fire Marshal's office, and their inspectors come and look the property over. If they condemn the property and owner carries the case to court, the state will fight the case.

When property is in a state where condemnation is necessary, the public is very considerate about removing the property. Once in a while, however, some one objects, but this is very seldom.

G. Rehm, Chief, Mobile, Ala.: We inspect a building when it is dilapidated and dangerous and then turn it over to the Building Inspector. If the case has to be taken to court, the inspector turns the matter over to the City Attorney. The public is usually with us on all orders of this sort.

N. Belfy, Chief, Muskegon, Mich.: Buildings are condemned in our state by the State Fire Marshal. When the situation has to be handled in court it is turned over to the local prosecutor and state attorney general. The public usually cooperates with us in matters of this kind.

* * *

ANSWERS TO PREVIOUS QUESTION

The following replies have been received in answer to a question on the methods for building up a pension or relief fund, how the fund is administered, and the benefits that are paid out by the fund:

John A. Grogg, Chief, Tiffin, Ohio: We are permitted by taxation, three tenths of one mill for our pension fund. We do not require all of it.

In determining pensions, we take two per cent of our last five years average of wages and then multiply by the number of years in service.

I have no suggestions to make for our pensions for I

They Reported a Most Enjoyable Time at the I. A. F. C. Havana Convention

Left—Chief J. A. Guizado and Capt. M. DeCastro of Panama City and their families enroute to Panama after convention. Right—Mrs. J. J. Spencer; J. J. Spencer, Battalion Chief N. Y. F. D.; Mrs. Thos. J. O'Toole, all of New York City.

believe we have the best pension laws in Ohio. No other state equals it.

C. E. Gillen, Chief, Racine, Wis.: We build up our funds by 2% of insurance premiums and 1% of monthly salaries, all fines imposed on members of the department for violations of department rules and all moneys deducted for time lost on account of sickness, all rewards in money, fees, gifts that may be paid or given for any service of any member.

Funds are administered by a Board of Trustees composed of the Mayor, City Treasurer, City Comptroller, Chief of the Department, and three active members of the department who are elected annually. Benefits are as follows: ½ pay after 22 years service, ½ pay for disabled members, 1/3 pay to the widows with $10 per month to minor children until 16 years of age.

C. I. Ingram, Chief, Montgomery, Ala.: We build up our pension funds by ½ of 1% gross insurance premiums from companies doing business in the city, 1% of firemen's monthly salary and also from donations.

The funds are administered by a Board of Trustees; $30 is paid monthly to widows of firemen, and the pensioners are retired on ½ salary.

We would suggest operating booths at County and State Fairs, etc., to increase the pension fund.

Frank Clark, Chief, Belvidere, Ill.: A tax of 2/5 of one mill on the dollar on all the taxable property of our city helps to build up our pension fund.

The Board of Trustees consisting of the treasurer, clerk, marshal or chief officer of the Fire Department and the comptroller and three active firemen control the administering of the pension fund. Any fireman having served twenty years of which the last five were continuous, and having reached the age of fifty is eligible for a pension. This pension is ½ of the monthly salary which he was receiving at the time of his retirement. The widow or children, or any person dependent upon the fireman for support receives a pension if the fireman was killed while on duty or does after being pensioned.

Trial Trip of New Boston Fire Boat

(*Continued from page* 898)

each. The steel turret mast is 30 feet above the water and alongside this mast are two derrick booms for use in wrecking operations such as lifting automobiles out of the water.

In the forward portion of the steel deckhouse is the nozzle and water control room. There are 12 hose outlets in front and 4 on each side. Aft of the engine room there is a locker room with steel lockers and next to this are the tool room and hose storage space. There is capacity for carrying 10,000 feet of hose, connections being provided for both 2½ and 3-inch hose.

The auxiliary equipment of two feed pumps, bilge pump, air pump, circulating pump, sanitary pump, and water and oil transfer pumps was made by Worthington and the two electric generators, a 10 k.w. and a 1½ k.w. generator, were made by Westinghouse. The American Blower Company, of Detroit, Mich., furnished the induced draft blowers for the boilers.

There is a single propeller of bronze with four blades. It is 8 feet, 9 inches in diameter with pitch of 9 feet, 9 inches and weighs 4,600 pounds having been especially designed by the Lawley firm.

The fuel tanks have a capacity of 70 tons of fuel oil and the water tanks hold 40 tons. The engine room telegraph was furnished by Charles Corey & Co. and the compass, lights, and flags were supplied by the firm of Kelvin & Wilfrid O. White, of Boston. The engine room is protected by foam equipment of the type used by the U. S. Navy. The windlass and steam steering gear were made by the Hyde Windlass Company, of Bath, Me.

The condensers were manufactured by the Ingersoll-Rand Company and the asbestos by the Johns-Manville Corporation. Andrew J. Morse & Son, Inc., furnished the water guns and nozzles. The decks are of Rangoon teak.

The hull is painted black and the deckhouse and pilot house are painted red. The interior of the pilot house and radio room just aft of the wheel house are finished in golden oak.

A pup boat or tender fitted with Universal motor and pump and Johnson Seahorse outboard engine is carried on davits, also a steel lifeboat. The lifeboat and davits were made by the Lane Lifeboat Company, of New York. There is a powerful electric searchlight made by Carlisle & Finch and there is radio receiving and transmitting apparatus by means of which radiophone conversations may be carried on between the vessel and the fire alarm office or the other fire boats. Boston was the first city to provide this equipment for its fireboats.

The steam gauges, whistle, and siren on the new fire boat were furnished by the Star Brass Manufacturing Company, of Boston. The rubber tile floor covering was made by the James Martin Company, of Boston, and the clocks by the Chelsea Clock Company.

On her trial trip the "Matthew J. Boyle" made a speed of 12 knots or 14 statute miles per hour at 160 revolutions per minute. The boat was launched on May 23 and will be placed in service on or before December 1.

There will be a crew of 15 men headed by Captain John Williams and Engineers Stephen McGinley and John Murphy, formerly of Engine 44, the fireboat "Angus J. McDonald." The new boat will be stationed at the Northern Avenue Bridge in Boston.

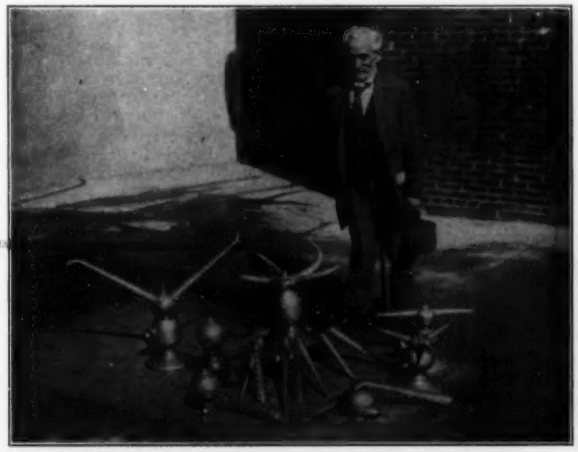
On the trial trip the vessel gave a fine performance, exceeding all the contract requirements. As she came up the harbor fishing vessels, tugs, and ferryboats joined in a noisy welcome, the din of whistled salutes being answered by the fire boat which put on a special exhibition of stream-throwing for the benefit of the press photographers and "movie" men.

Fire Fighting in India

(*Continued from page* 890)

there are two distinctly different kinds in use in India: 1—the foam-type extinguisher which incorporates two liquid solutions, which, when brought together, generates foam; 2—the dry powder foam fire-extinguisher, which immediately generates foam when mixed with water (fresh or salt water). These types of foam extinguishers are particularly suitable for use in India, as the dry powder foam can be stored in hermetically sealed tins until the time of outbreak of fire.

To sell fire apparatus in the Indian market, it is essential to maintain an agent or be represented by a good firm of engineers already established in Calcutta and/or Bombay. Fire brigades, government offices, and railways (this applies also to commercial houses and industrial undertakings) give preference, as a rule, to suppliers with offices on the spot and meeting demands from stock in India.



A New Idea in Automatic Sprinkler Heads

Lucian Mantell, of New York City, exhibited to Philadelphia officials his sprinkler device for protecting large public and private buildings. Instead of having a number of small sprinkler heads, he has one large rotating arm with openings to which different types and lengths of nozzles may be attached. With the aid of the revolving head and the arms, the inventor claims that it can sprinkle an area varying from fifty to 350 square feet. The inventor is standing beside his sprinklers.

NEW YORK CITY HAS MODEL MOTION PICTURE FILM LAW

New Ordinance Result of Conference by Best Minds in Fire Department, Underwriters and the Motion Picture Industry — Text of Law

By WM. JEROME DALY

(Concluded from November 11 issue)

FOLLOWING is the last installment reproducing the test of the New York City ordinance intended to "put teeth" into the laws relative to inflammable motion picture film. The new law represents the composite thought of the "best minds" in the fire-fighting service, the insurance underwriters, the fire prevention field and the motion picture representatives themselves. It is the culmination of eighteen months of sincere, earnest, painstaking and technical efforts to get the safest regulations possible for both the industry and the public.

The title of the new law is as follows:

AN ORDINANCE to amend chapter 10 of the Code of Ordinances by adding a new article 20, in relation to inflammable motion picture film, and repealing the present article 20 of chapter 10, and subdivision 23 of section 1 of article 1 of chapter 10, relating to the same subject.

Be it Ordained, by the Board of Aldermen of The City of New York, as follows:

Section 1. Article 20 of chapter 10 of the Code of Ordinances is hereby repealed and a new article 20 is inserted in place thereof to read as follows:

Article 20

Sections 240 to 246 and part of Section 247 have already been published. Following is the conclusion of Section 247:

§247. Laboratories.

3. Printing. Printing rooms in which more than 15 persons worked on the date whereupon this article shall become effective may continue to operate with that number of persons, but not over 30 persons shall work in such printing rooms. Printing machines shall be spaced so that the distance from the film on one machine to that on any other machine shall not be less than 4 feet.

4. Drying. Drying machines of the cabinet type shall be of metal and glass. Heating units shall be located outside the cabinet, and shall be provided with thermostatic control so that the temperature in the cabinet shall not exceed 150 degrees Fahrenheit.

5. Waxing. Waxing processes which require the waxed film to be left exposed to dry shall be in a room used for no other purpose and not over 5 such machines shall be located in one room. Not over 25 reels or 25,000 feet of film shall be exposed at one time.

6. Shipping room. Packing film for shipment shall be done in a room with no other process. Not over 500 reels of film shall be in the shipping room at one time, of which the quantity not in shipping cases shall not exceed 250 reels.

7. Storage of film. All storage of film shall be in vaults constructed as provided in this article; provided, however, that raw stock in original shipping cases may be stored in a special room used for no other purpose.

§248. Exchanges and depots.

Motion picture film exchanges and depots shall comply with the following in addition to the general provisions of section 243:

(a) In the shipping or receiving room of exchanges there shall be no film other than that in the process of immediate receipt, delivery or distribution. All other film shall be kept in vaults.

(b) All film shall be kept in closed containers except while actually being worked upon. All film not necessary for immediate use shall be kept in vaults.

(c) In inspection, rewinding, measuring and other rooms there shall not be in excess of 15 reels of film for each person working in such rooms of which not in excess of 2 reels for each person working in such rooms shall be exposed, except that not in excess of 4 reels of film for each person may be exposed in the measuring room.

§249. Transportation.

No person shall transport inflammable motion picture films in any underground subway train, or carry the same into any underground subway station, provided, however, that the provisions of this section shall not apply to inflammable films transported in the course of interstate commerce, in railway baggage or express cars under the jurisdiction and subject to the regulations of the Interstate Commerce Commission. No person shall transport inflammable motion picture films in any street car, elevated train, omnibus, ferryboat or other public conveyance, or carry the same into any railway station or ferry house, unless each film shall be separately enclosed in a tightly closed metal box. Not more than 8 reels, so enclosed, shall be carried at one time by any person.

Section 2. Subdivision 23 of section 1 of article 1 of chapter 10 of the Code of Ordinances is hereby repealed.

Section 3. The repeal by this ordinance of any provision of the Code of Ordinances shall not affect or impair any act done, offense committed or existing right or liability, forfeiture or punishment incurred prior to the time this ordinance takes effect, but the same may be enjoyed, asserted, enforced, prosecuted or inflicted as fully and to the same extent as if this ordinance had not been enacted.

Section 4. This ordinance shall take effect immediately.

With the advent of the sound picture, many of the theatres built before the sound era found themselves at a disadvantage, so their owners, to keep abreast of the times, installed all sorts of acoustics. Many of these commodities were inflammable felt and other materials. To safeguard the motion picture loving public the following amended ordinance was adopted by the New York City Board of Aldermen. It runs as follows:

AN ORDINANCE to amend subdivision 2 of section 534 of article 25 of chapter 5 of the Code of Ordinances, constituting the building code, in relation to coverings in theatres and places of amusement.

Be it Ordained, by the Board of Aldermen of The City of New York, as follows:

Section 1. Subdivision 2 of section 534 of article 25 of chapter 5 of the Code of Ordinances is hereby amended to read as follows:

Covering. None of the walls or ceilings shall be covered with wood sheeting, canvas or any combustible material. But this shall not exclude the use of wood wainscoting to a heighth not to exceed 6 feet *nor the use of fabrics of monk's cloth, canvas, muslin, burlap, silk, satin, velvet, velour or other similar materials suspended from ceilings other than ceilings above the main auditorium, or hanging against walls or partitions, if painted, sprayed, or saturated with fire retarding or flame-proof material or otherwise rendered and maintained safe against fire, provided the space between the wall and the wainscoting or between the wall and any such material, as the case may be, when such material forms a part of a wall,* [which] shall be filled in solid [between wainscoting and the wall] with fireproofing material.

Section 2. This ordinance shall take effect immediately.

Note—New matter in *italics;* old matter, in brackets [ ], to be omitted.

Muskogee, Okla., Has a New Pumper

A 1,000-gallon Seagrave pumper was recently placed in service in Muskogee, Okla. It is provided with a 100-gallon booster tank and foam extinguishers. Chief Henry Sager is seated at the wheel.

Hamburg, N. Y., is planning the formation of a Junior Fire Department consisting of boys of school age.

FIRE DEPARTMENT ACTIVITES

A 1,000-gallon Buffalo pumper has been delivered to Bradford, Pa.

A Fire Department has been organized in Westgage, Cal., with D. P. Williams as Chief.

Atwater, Ohio, has awarded a contract for the construction of a new fire station.

A 300-gallon pumper with a 150-gallon booster tank, has been delivered to New Judson, Ind.

Alden, N. Y., voted to spend $10,200 for the purchase of fire apparatus. The issue carried by a two to one majority.

A new fire house is being urged for Harrison, N. Y., because of the increase in population.

A 1,000-gallon pumper has been placed in service in the Central Fire Station, Taunton, Mass.

Eldora, Ia., is considering the purchase of new fire apparatus to replace a light truck now in use.

Wauconda, Wis., has received Pirsch apparatus. It was tested by an engineer from the Underwriters.

Irvington, N. Y., is considering the plan to erect a new fire house opposite the town hall.

Emmons, Ia., has just received new fire apparatus mounted on a Chevrolet chassis.

Plans have been accepted in Woodland, Cal., for the construction of a combined building to serve the Fire and Police Departments and to contain a jail.

Apparatus has been delivered in Monticello, Ia., for the protection of rural property. Shares in the apparatus were sold for twenty-five dollars each.

A quadruple pumper has been placed in service in Campbell, Ohio, after it had passed the standard Underwriters' tests conducted by the Ohio Inspection Bureau.

The Bureau of Reclamation has purchased combination fire apparatus for Boulder City and will erect a fire station. A volunteer Fire Department has been formed.

Business men of Durand, Wis., purchased a pumper for the Fire Department to be used in protecting farm property. The pumper is capable of pumping 350 g.p.m.

A Mack pumper has been delivered to Jersey Shore, Pa. Bids were advertised in May, and in June changes were made in the specifications and new bids were invited.

Bay Terrace, Cal., is considering the formation of a fire district. A meeting has been held to consider the legal side of the problem.

Bids were opened in Altoona, Pa., for the construction of a new fire station on ground donated to the city for that purpose by the Pennsylvania Railroad.

A new fire station is to be erected in Oceanside, L. I., N. Y. The Columbia Fire Company voted to purchase land and to erect a new house.

Chester, Pa., has received a new Mack 400-gallon pumper, equipped with a booster tank and pump. The apparatus is provided with salvage covers and a gas mask.

Another bungalow type fire station will be erected in Houston, Tex., to be known as Station No. 3. It will cost $12,000 and will be of brick veneer construction.

Funds have been raised in Monongah, W. Va., for the purchase of fire appartus. It will be owned by the Monongah Voluntary Firemen's Association.

An agreement has been reached by the towns of Auburn and Osceola, Wis., for the purchase of new fire apparatus. The unit will be housed in Campbellsport.

An arson squad has been established in Schenectady, N. Y. Two detectives have been assigned to work with the Fire Department to investigate suspicious fires.

Firemen of Irvington, N. Y., have again brought up the subject of the erection of a new fire station. The firemen ask for a referendum vote to consider the erection of a building to cost $70,000.

A movement has been started in Stanton, Ia., for the purchase of fire apparatus to protect rural property. Membership will cost ten dollars, and for non-members a fee of $35 will be charged for the use of the apparatus.

A meeting was held in Columbia City, Ind., of the Board of Directors of the Northern Indiana Industrial and Volunteer Firemen's Association to make preliminary plans for the 1932 convention which will be held in that city in June.

Marble Rock, Ia., and the fire company have purchased a Nott community fire apparatus provided with a 400-gallon pumper and carrying a 100-gallon booster tank. It is to be used for the protection of farm property as well.

Contracts have been awarded for the erection of a fire station on Sutton Avenue, Cincinnati, Ohio, which will cost $40,000. The building will be of brick and will have two stories and a basement.

A request for a new fire station in the Walnut Park section of Huntington Park, Cal., has been made by the Chamber of Commerce. Funds are available for the contemplated building.

An average of twenty-one forest fires each day during the season, has been reported by a Montana forest ranger. In all there were 1,537 fires started by careless tourists, lightning, logging operations, the unauthorized burning of brush and so forth.

A farmers' community truck is to be delivered to Monticello, Ia., for service in the adjoining rural territory. The apparatus was purchased by means of the shareholder plan. The apparatus has a booster pumper and a 100-gallon booster tank.

Fire apparatus of Mt. Carmel, Pa., was wrecked while responding to a fire. Two men were injured but not seriously when the apparatus struck a roadster, and before the truck could be stopped it pushed the automobile into a row of parked cars and piled up four of them.

Excavation has been started on an engine house for Parkersburg, W. Va. The house will have a 65-foot drill tower, and a smoke room in the basement. It is believed that this is the first station in the state to be provided with a drill tower.

Four townships have signed contracts with Whitewater, Wis., for rural fire protection. A new pumper costing $5,400 has been delivered to Whitewater. Contracts, by which $200 a year will be paid for fire protection, have been signed by Whitewater, Lima, La Grange and Coldspring Townships.

Fredericktown, Mo., voted to purchase new fire apparatus to cost about $6,000. To make this possible, twelve volunteer firemen voted to work without pay until the equipment was paid for. Each fireman gets sixty dollars a year and the Chief one hundred dollars.

Twenty-four firemen of the Asheville, N. C., Fire Department will be discharged as an economy move by the City Manager. In all, 128 employees will be removed from the city payroll, but the brunt of the slash is being borne by the Fire Department.

York, Neb., has ordered the purchase of a new pumper to replace one that has been in service for the past fourteen years. The Nebraska Inspection Bureau warned the city that it had to purchase new equipment or else pay higher fire insurance rates.

Firemen of Rome, Ga., for the sixth consecutive year, are planning to reconstruct toys for the children of the rural districts. In this work they have been assisted by a number of the city residents. The gifts are distributed by the rural mail carriers and by county post offices, by special permission of the U. S. Postmaster-General.

City firemen may be used to store large quantities of food for the relief of the unemployed, if the plan of an alderman of Manitowoc, Wis., is approved. Under the proposed plan, the wholesale quantities of food would be stored in the North Side fire station. Firemen would serve as clerks and be in general charge of the supplies to be given out upon order of the city Commissioner of the Poor.

Plans have been made for the erection of a new fire station in Indianapolis, Ind. The building will be of the bungalow type, one story high. On the main floor will be the apparatus room, the men's lounge, offices for the captain and battalion chief, dormitories, lock room and toilet. In the basement will be the kitchen, dining room, and space for the heating apparatus.

PROPOSED IMPROVEMENTS

Burlington, N. J.—Ordinance was passed on first reading by City Council providing for fire truck bonds to the amount of $18,000.

Passaic, N. J.—Fire Chief Reginald H. Bowker recommended the purchase of a pumper to replace the one now in use by Engine Co. No. 6.

Fremont, Ohio—The purchase of additional fire apparatus and equipment was recommended at dinner of inspectors, city officials and service clubs of city. William Berger, Chief of Fire Dept.

Roosevelt, N. Y. — Roosevelt Fire District to vote Dec. 3 on appropriation of $11,500 for purchase of a pumper and a hose truck.

Wasta, S. Dak.—At recent meeting of volunteer fire department it was voted to purchase additional fire equipment, according to reports.

Wanted
Sales Representatives

Calling on Fire Chiefs and large Industrials to represent us selling Ecolite Electric Lanterns. Good profits, no selling resistance. Give references and lines now handled. ECONOMY ELECTRIC LANTERN CO., 325 W. Huron, Chicago.
11-11, 25

Moline Has Fire Scout Patrol

Through the cooperation of the Association of Commerce, Moline, Ill., now has the Moline Scout Fire Patrol organized on a permanent basis. The Chamber of Commerce has encouraged the venture and has provided official Boy Scout Fire Patrol badges.

The Boy Scout Fire Patrol was formed to assist the firemen in any way that the Chief of the Fire Department or an officer shall see fit, and in case of fire in some district, the members of that district must report to the commanding officer. No Boy Scout can aid the department without first receiving orders from the Captain or the Fire Chief.

The Boy Scout Firemen serves in an advisory capacity in their district. They report fire hazards such as accumulation of trash and rubbish in alleys, back yards, attics, sheds, the burning of trash and defective flues. They are given authority to notify tenants that the rubbish must be removed and defective conditions given prompt attention. The locaions of all hazards are reported to the Fire Chief.

In case of fire, the boys are called upon to watch the roofs of adjoining buildings and the surrounding neighborhood so that sparks will not start new fires. They help with the hose and perform such other duties as the Captain may require. All activities in reference to fire fighting that are performed by the Boy Scouts are reported to the Scout Executive and the Chamber of Commerce.

Two years ago the Scout Executive was appointed as a member of the Fire Prevention Committee. R. B. Lowrie, Chairman, called a special meeting at which "Smoky" Rogers, the Fire Clown, told of how Boy Scout Fire Patrols were operating in other cities. Following this meeting, Mr. Lowrie instructed the Scout Executive to organize a Moline Scout Fire Patrol and such an organization was started immediately. Thirty-six boys attended the first meeting.

The organization consists of Scout Executive R. L. Bracher as Commissioner and Norman L. Tarrants as Chief. Captain John Polchow of the Moline Fire Department is the instructor. The patrol consists of twenty active members including a Chief, Assistant Chiefs and Captains. The boys have been called upon a number of times and they have rendered valuable service.

Newly Elected Chiefs

The following have been elected to head the Fire Departments in their respective municipalities:

Granville, N. Y.—Warren Dunn.
Ridgeley, Md.—J. K. Snowberger.
Dewitt, Neb.—E. F. Bailey.
Almond, Wis.—Joe Washatko.
East Herkimer, N. Y.—Clarence Patterson.

Changes have been made in the design of the portable flood lights manufactured by the National Carbide Sales Corporation. The large light which formerly had a capacity of nine hours of operation can now operate for twelve hours on one charge. The lights are self contained and if they are knocked over, there is no danger. The carbide is kept in a separate container and is automatically fed into the water by a feed plunger.

Suggests Chicago Pay Reductions

Reductions in rank and therefore a large reduction in the annual pay roll of officers of the Chicago Fire Department, has been recommended to the Finance Committee by J. L. Jacobs, City Efficiency Engineer.

He urged that the fourteen positions of Division Fire Marshal be abolished. Twelve of these men who rank in the department below the Deputy Fire Marshals receive $4,500 a year, one gets $5,000 and another $5,200. Another economy move is to reduce sixty-three lieutenants to the rank of firemen with corresponding salary reductions from $2,900 to $2,500. Mr. Jacobs wants fire engineers who receive $2,880 to be demoted to firemen as that rank receives $2,500. The expert did not ask that the number of men in the department be reduced.

The alderman in charge of the Committee on Fire and Civil Service expressed displeasure at the recommendations and he opposed any changes in the rank of Division Marshal.

New Trade Literature Received

The following literature descriptive of up-to-date methods and equipment for fire departments, has just been issued for general distribution, and can be procured by writing to the concerns mentioned. Those desiring additional trade literature in which they are interested can use our regular "Information for Buyers" pages, listed in the Advertising Index.

The Diamond Rubber Company, Akron, O.—New edition of the mechanical catalogue, illustrating a number of new items.

Special Clothing Co., Chicago, Ill.—Catalogue describing a line of firemen's coats, bunking pants, boots, etc.; illustrated, sixteen pages and cover.

Iowa Valve Co., Oskaloosa, Ia.—Catalogue No. 22 describing the Iowa valves and hydrants—gate valves, relief valves, check valves, flap valves, floor stands, etc. Contains many illustrations; 74 pages and cover.

Department and Other Reports Received

Worcester, Mass.—Annual report of the Worcester, Mass., Fire Department.

Minneapolis, Minn.—Annual report of the Fire Department; illustrated, fifty-nine pages and cover.

CONVENTION DATES

Dec. 5-6—NORTHERN CALIFORNIA FIREMEN'S ASSOCIATION. Next meeting, Arbuckle, Cal. Secretary, Asst. Chief H. K. Smith, Fire Headquarters, Redding, Cal.

Dec. 16—FIRE CHIEFS' EMERGENCY PLAN, OF WESTCHESTER COUNTY, N. Y. Regular Meeting, Fire Headquarters, Mount Vernon, N. Y. Secretary, Lieut. E. Riviere, Fire Headquarters, Larchmont, N. Y.

Jan. 8, 1932—FIRE CHIEFS' COUNCIL OF NASSAU COUNTY, N. Y. Next meeting, Garden City, L. I., N. Y. President, Chief George Maier, Long Beach, L. I.

Jan. 23-24, 1932—SOUTHERN CALIFORNIA FIRE CHIEFS' CLUB. Next meeting, Island of Catalina, Cal. Secretary-Treasurer, Charles E. Smith, Chula Vista, Cal.

May 9-12, 1932—NATIONAL FIRE PROTECTION ASSOCIATION. 36th Annual Meeting, Atlantic City, N. J. Managing Director, Franklin H. Wentworth, 60 Batterymarch St., Boston, Mass.

May 11, 1932—DEL-MAR-VA VOLUNTEER FIREMEN'S ASSOCIATION. 3rd Annual Convention, Cape Charles, Va. Secretary, W. A. Karpa, Cape Charles, Va.

June, 1932—NORTHWESTERN OHIO VOLUNTEER FIREMEN'S ASSOCIATION, 60th Annual Convention, Gibsonburg, Ohio (exact date to be decided later). Secretary, Harry Smith, Supt., Water Works, Port Clinton, Ohio.

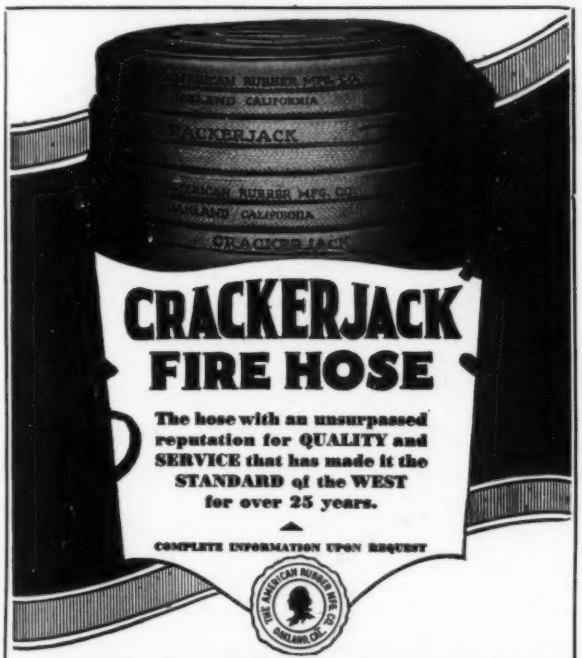
June 21-24, 1932—ILLINOIS FIRE COLLEGE, 8th Annual College, University of Illinois, Champaign-Urbana, Ill. Director, Prof. L. H. Province; Secretary, Asst. Chief Roy W. Alsip, Fire Department, Champaign, Ill.

June 21-24, 1932—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS, 10th annual convention, Newport, R. I. Secretary, John W. O'Hearn, Watertown, Mass.

Aug., 1932—VIRGINIA STATE FIREMEN'S ASSOCIATION. 46th Annual Convention, Alexandria, Va. (Exact date to be determined later.) Secretary, O. W. Dabney, Staunton, Va.

Aug. 2-4, 1932—INDIANA FIREMEN'S ASSOCIATION. 16th Annual Convention, Columbus, Ind. Secretary, Clem Smith, Post Office Box 520, Terre Haute, Ind.

Sept. 21-22, 1932—NEW CASTLE COUNTY FIREMEN'S ASSOCIATION. Annual Convention, Wilmington, Del.



CRACKERJACK FIRE HOSE

The hose with an unsurpassed reputation for QUALITY and SERVICE that has made it the STANDARD of the WEST for over 25 years.

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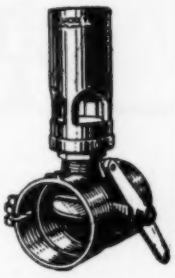
Kansas City, Mo. 5547 Lydia St.
Salt Lake City, Utah 149 W. Second So. St.
Dallas, Tex. 3035 Commerce St.
Utica, New York 109 Harter Place
Baltimore, Md., 407 Munsey Bldg.

SIGNALS you can *hear* and *see*



ROTO-RAYS *and* ROTO-RAYS, JR. *for any apparatus*

BUCKEYE WHISTLE

The most effective combination of warning signals in existence. Buckeye Whistles to warn them—Buckeye "Roto-Rays" to show them where you are. The three revolving red lights of "Roto-Rays" are an unmistakable identification of fire apparatus. Can be seen for many blocks even in congested traffic. Now made in Junior Model for chiefs' cars, ambulances, police vehicles, smaller apparatus. Write for complete information.

Buckeye Iron & Brass Works
326 E. Third St., Dayton, Ohio

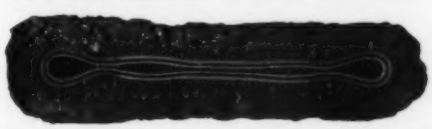
BUCKEYE
WARNING SIGNALS THAT WARN

HEWITT-GUTTA PERCHA FIRE HOSE

A complete line, including
Wax Treated - Solid Multiple Woven
AND
Single and Double Jacket Hose

Manufactured by
HEWITT - GUTTA PERCHA
RUBBER CORPORATION
BUFFALO, N. Y.
"Territories Available"

Bi-Lateral Fire Hose



The one hose that does not require frequent replacements. Always reliable for fire service no matter how old, if the jackets are intact.
Lined with three rubber tubes, specifically guaranteed for six years.

BI-LATERAL FIRE HOSE CO.
15 Park Row, New York, N. Y.
20 N. Wacker Drive, Chicago, Ill.

The Smith **INDIAN** Fire Pump

HAS MANY USES!

Patented

Every now and then we hear of a new use for an INDIAN FIRE PUMP. They are the quickest and surest way of extinguishing fires in awnings and roofs. One department recently used their Indians for a fire in a poultry house. INDIANS are unsurpassed for forest grass and brush fires.

D. B. SMITH & CO.
417 Main St. Utica, N. Y.

PACIFIC COAST AGENTS:
Fire Protection Engineering Co.
369 Pine St., San Francisco
7451 Willoughby Ave., Los Angeles
Marion Bldg., Seattle

D. B. SMITH & CO.
417 Main St.
Utica, N. Y.

Gentlemen: Please send at once further particulars regarding your INDIAN and other fire extinguishers.

NAME .....
ADDRESS .....
CITY ..... STATE.....

FALSE ALARMS

STILL HAPPY

In place of their customary annual dance, the Fire Department sponsored the showing of a motion picture. There was a very good turnout the night of the show, and it was difficult to find seats for everyone. One of the ushers came to the back part of the theatre and said:

"Only a few single seats left, no others. Anybody want a single? Come on, speak up, just a few!"

There was a perfect silence.

"What the hell," asked the usher very much surprised, "aren't some of you married?"

Floyd Gibbons, for his efforts at a forest fire, was made an honorary member of the Yellowstone National Park Rangers. He probably outtalked the fire.

TIT FOR TAT

The recent trip of the Chiefs to Havana brings to mind the story of the husband who went to Europe and left his wife home. From Italy he mailed a card:

"Am enjoying Florence immensely."

And he received a letter from his wife:

"You can stay in Europe. I'm having a good time with Oscar."

In an old-fashioned courtship they used to turn down the gas, and in the new one they step on it.

OF NO VALUE

"What kind of a day did you have?" he asked sweetly.

"Rotten," answered the wife. "The ice man didn't come, there were no canvassers and now you come home and say you're dead tired."

And what's the use of women wearing those 1890 capes if there are no beer cans to hide under them?

THE WRONG ANSWER

"Where have you been all evening?" asked the Missus when the errant husband came home very late in the evening.

"Oh, just at the office, dear."

"You must be made of asbestos," answered his wife. "Your office building burned down two hours ago."—*The Fire Plug.*

About the best break a pedestrian can expect is to get hit by an ambulance.

OCCUPIED

It isn't every day that a village opens a new Fire Hall. So when this building was opened, the village arranged a party to which everybody was invited. There was dancing, refreshments, and the rest that goes with it.

Of course, the event was common talk, the following day.

"Did you have a nice time at the party?" asked one.

"Well, I had a nice party at the time."

Alimony was invented so that a woman wouldn't have to take a man's name in vain.

NO FRIEND

Even in a fire station where men must depend to a certain extent upon each other, there are often some firemen who cannot get along. That's why one said:

"I've no use for that guy, Terry Connors."

"Why? What's the matter with him?"

"He's the sort of fellow that pats you on the back before your face and hits you in the eye behind your back."

Classified advertisement: Wanted—Girls to strip in tobacco factory.

ONE SANDWICH

Some of the fellows like to go to the convention alone as they are then able to select their own companion when they arrive at the convention city. And so one of the officers found an attractive young lady who was easy on the eyes, and, as usual, was hungry.

At the restaurant, the gallant officer asked:

"What would you like?"

"Let me see," she said. "I'd like a fruit cocktail, caviar, some frogs' legs, sirloin steak smothered in mushrooms, a large lobster, French pastry and demi-tasse."

"That's all very well, but now what will you have?"

The ultimate in woman's clothes—to feel the coolest and look the hottest.

OLD STUFF

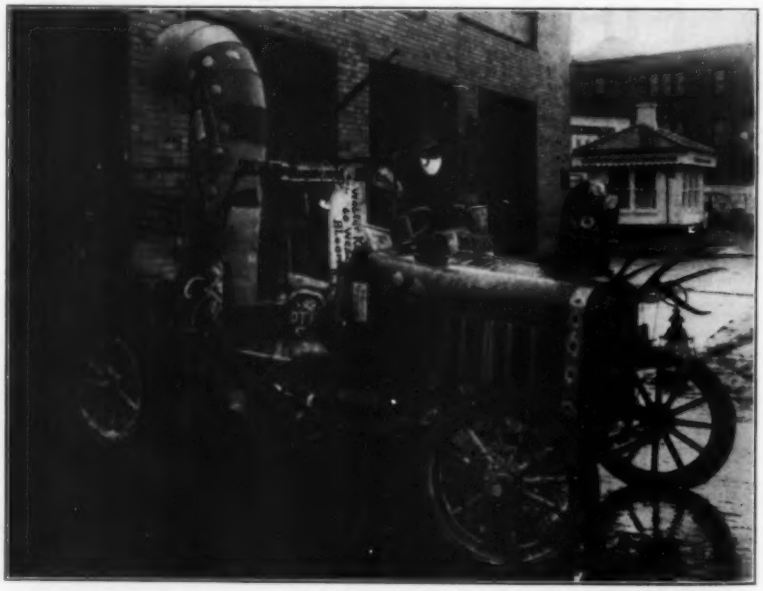
Firemen were called to fight a very smoky fire in a fraternity house bordering on the college campus. Some of the boys who were asleep on the second floor had to be carried out. One fellow was in a bad condition and was ordered to the local hospital.

"Go and get his name," a fireman said to a student, "so that we can notify his folks."

Some minutes later the messenger walked over and said:

"He says his folks know his name."

A St. Louis company advertises, "Read this interesting new free booklet telling just what lightning is and how to prevent it." Looks like heavenly competition, doesn't it?



The Latest But Not the Most Approved Design of Fire Apparatus

As an exhibit in the Hallowe'en parade, the Meadville, Pa., Fire Department built the above apparatus from a 1924 Chevrolet which was in good running order. Twenty-five members blackened their faces, dressed in pajamas and thus became affiliated with the Darktown Fire Department. The exhaust line was connected to the large furnace pipe, and this was kept wet on the inside with kerosene so that plenty of smoke was generated. On one side of the unusual apparatus, there was a banner advocating Eddie Cantor for president, and on the other, the phrase, "We want beer." The exhibit won a prize in the parade.

YOUR CATALOG PAGE

Fire Protection Equipment and Supplies

1 Acid Siphons.
2 Adaptors for Changing Hydrant Threads.
3 Acid Jars and Rings.
4 Aerial Ladders, Detachable.
5 Aerial Trucks.
6 Alarms, Siren, Electric.
7 Alarm Systems, Industrial.
8 Alarm Systems, Municipal Telegraphic.
9 Alarms, Thermostatic.
10 Asbestos Clothing.
11 Badges, Insignias, Buttons, etc.
12 Banners, Trumpets, etc.
13 Battery Jars.
14 Battery Zincs for Fire Alarm Batteries.
15 Bells, Fire Alarm, Municipal
16 Body Equipments.
17 Boxes, Gongs, Reels, Registers, Fire Alarm.
18 Brakes, Air.
19 Brake Linings.
20 Brooms, Fire.
21 Building Materials, Fire Retardant.
22 Caps, Firemen's.
23 Chains, Non-Skid Fire Apparatus.
24 Chassis for Fire Apparatus.
25 Chemical Engines and Tanks.
26 Chimney Fire Fusees & Compounds
27 City Service Trucks.
28 Coats & Suits, Firemen's Quick Hitch.
29 Combination Chemical & Hose Cars.
30 Cutting & Welding Equipment Blow Torch.
31 Cutting & Welding Equipment, Electric.
32 Deluge Sets.
33 Door Openers, Fire Station, Automatic.
34 Extinguishers, Calcium Chloride.
35 Extinguishers, Carbon Dioxide.
36 Extinguishers, Soda-Acid
37 Extinguishers, Carbon Tetrachloride.
38 Extinguishers, Foam.
39 Extinguishers, Powder.
40 Fire Boat Nozzle Equipment.
41 Fire Department Supplies, General.
42 Fire Exit Devices, Door Opening.
43 Fire Alarm Posts.
44 Fire Escapes, Portable.
45 Fire Escapes, Rigid.
46 First Aid Equipment.
47 Flare Lights.
48 Flashlights, Hand.
49 Foam Generating Apparatus.
50 Foam Liquid for Extinguishers.
51 Gas Masks and Respirators.
52 Gas & Smoke Helmets.
53 Goggles, Firemen's.
54 Helmets, Metal, etc.
55 Hose Carts, Reels & Racks.
56 Hose Clamps.
57 Hose, Fire.
58 Hose, Chemical.
59 Hose Holders.
60 Hose Jackets.
61 Hose Standardization Tools.
62 Hydrant Draining Pumps.
63 Hydrants, Fire.
64 Jacks for Fire Trucks.
65 Jacks, Shoring & Prying.
66 Ladders, Fire.
67 Lightning Arresters.
68 Motorcycles, Fire Dept. Equipped.
69 Nets, Life.
70 Nozzles, Pipes & Misc. Brass Goods.
71 Packings, Pumps.
72 Pads, Pole Hole.
73 Paints, Fire Resisting.
74 Priming Ether, Motor.
75 Pumping Cars, Standard.
76 Pumping Cars, Foam.
77 Pumps, Fire Apparatus.
78 Pumps, Fire Service, Stationary.
79 Pumps, Portable for Fire Protection.
80 Record Books, Fire.
81 Relief Valves.
82 Reviving Apparatus, Oxygen.
83 Rubber Clothing.
84 Salvage Covers.
85 Searchlights.
86 Shingles, Fire Retardant.
87 Shirts, Firemen's Special.
88 Sirens, Apparatus & Chiefs' Cars
89 Sliding Poles.
90 Soda & Acid Chemicals.
91 Spark Plugs, Fire Apparatus & Motorcycles.
92 Squad and other Auxiliary Cars.
93 Sprinkler Head Shut-Offs.
94 Sprinkler Supervisory Service.
95 Sprinkler Systems, Automatic, Foam.
96 Sprinkler Systems, Automatic, Water.
97 Steam Fire Engines.
98 Syphons, Water.
99 Tarpaulins & Fire Blankets.
100 Tetrachloride Chemicals.
101 Thawing Equipment, Hydrant.
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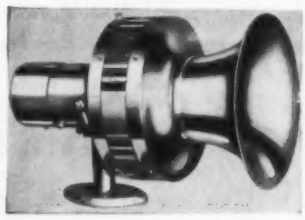

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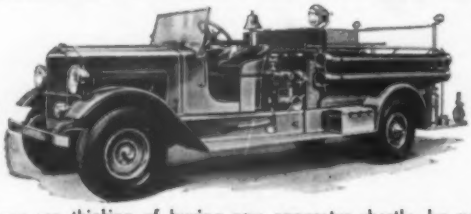

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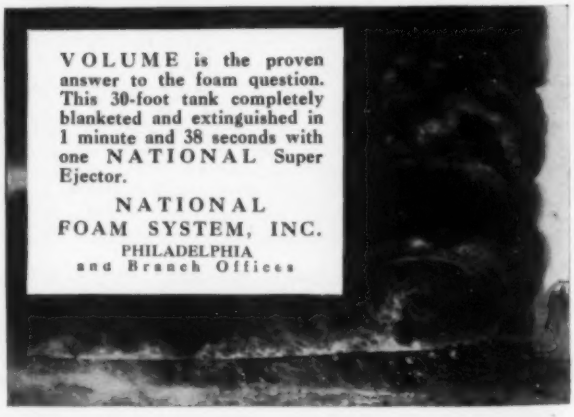

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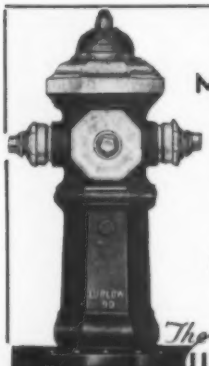

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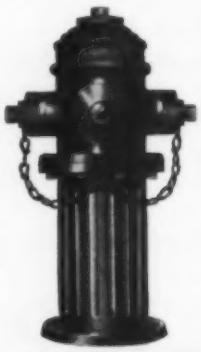

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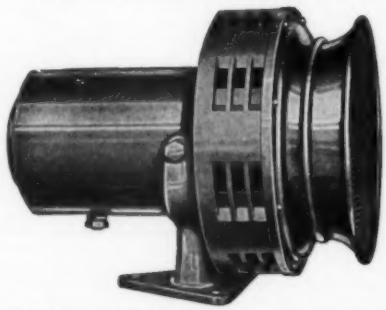

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